

American Embassy
Jidda, Saudi Arabia
July 18, 1954

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: B. H. Rountree, Agronomist *BHR*

SUBJECT: Summary Report

This technician arrived in Jidda in January 1954. Within one week of arrival a trip was made to Khulais with other technicians where work was already in progress. A water supply from deep wells had been developed in a small section of their wadi. Plans were already under way to develop a livestock and agronomic station.

An area suitable for cultivation and irrigation was selected near one of the better wells for development. This was to be for trial plantings and seed increase.

A contour map was made of the land and arrangements were made to do leveling. Work was started on building a pump house to house the irrigation pump and motor. When the foundation had been about half finished, a tribe of local people instructed us to leave, stating that we were trespassing. The Saudi Government assured us that this was Government land. We were never allowed to go back to Wadi Khulais to work. Surveys had been made in the wadi to determine types of crops being grown, need of fertilizers, insecticides, etc. Some seed and fertilizer had been distributed and the landowners themselves seemed particularly interested in crop improvement, fertilizers and insect control. Demonstrations showing how to apply fertilizers and to use insecticides were conducted on several farms.

Seeds of tomatoes, cucumbers, watermelons, peppers, egg plants and cantaloupes were distributed with demonstrations on how to plant. The farmers were interested and showed much enthusiasm, but very little interest could be generated in the Ministry of Agriculture. Planting plans and varietal tests were worked out with a Saudi Government counterpart, but the Ministry of Agriculture never allowed these plans to be approved.

Similar work was carried on in Wadi Fatima except that no experiment station was planned. Different groups showed the same interest in improved varieties of seed, fertilizers and insecticides. Field plantings and fertilizer tests were started that showed very promising results, but before the actual results could be tabulated, we were instructed by the SAG to not go further than 10 kilometers from Jidda without prior approval from the Minister of Foreign Affairs.

It seems that the people are really interested in the type of service we have to offer and individual farmers are most cooperative and enthusiastic, but this is certainly not true of the Ministry.

I believe that the Government must have an earnest desire to help its people before any organization can be of much real assistance and provide lasting improvements.

I have never worked with a more enthusiastic group of U.S. technicians. They were anxious to do their jobs and saw great possibilities for helping the country. It seems that instead of getting the expected cooperation, special efforts were made to see that our program did not get under way.

BHRountree:o

Preliminary Soils Review
Farm of
Shaikh Abdullah Sulaiman - Jidda

On June 22, 1954, a rough review was made of the soils on the farm just east of Jidda belonging to Shaikh Abdullah Sulaiman. This farm lies partly in a small mountain valley where a dibble starts and partly on the old sea plain, occupied by Jidda and the airport which it joins. (See sketch map attached).

One mile intervals are indicated on the map as they were measured on the speedometer of the jeep station wagon. Some allowance was made for side trips but these were not accurately measured so there may be considerable inaccuracy in distances indicated on the map.

Geology

A brown desert soil weathered to twenty feet or more was found extending from the airport road to the mountains. This soil is probably very old in its weathering processes but due to low precipitation may have accumulated large amounts of minerals and plant nutrients as they could not leach or drain away. The parent material is a mixture of colluvium which was probably deposited by fast-moving water. Some particles are smooth and rounded while others are very sharp and angular. There is considerable fine material mixed with the soil so it can be classified loam. This material is slightly cemented though it should have fair to good internal drainage and good water-holding capacity. It is also far enough above sea level, (more than 20 feet) that it will not be affected by a high water table due to sea level. At the airport road, the land may be less than 20 feet above sea level but internal drainage appears good. This area is indicated on the map by the symbol (A).

Area (C) and the west end of (B) are alluvial materials overlying the material described in area (A). The well-rounded, stratified alluvial material is loose, leachy, and droughty, some being subject to drifting by wind. This layer of overburden is not uniform in depth and is cut in a few places by wadis.

Areas (D), (E), and the eastern portion of (B) are loose, water-laid materials. There are a few rock outcrops in area (E) and most of the soils of (D) and (E) are fine and well-sorted and rounded. The eastern end of area (B) has been affected by fast-moving water and is cut by wadis as well as having materials of various sizes scattered throughout the profile.

Soils (See profile diagrams)

The soils of area (A) are probably the best medium in which to raise crops. The slightly cemented loam soil should be abundant in many plant nutrients with perhaps a deficiency in nitrogen and phosphate. This is a brown desert soil with a very gentle slope. Moisture-air relations in this soil should be good.

Area (C) has a shallow layer (about 10 inches) of stratified sand and loamy sand over sandy loam. This soil would require more water and fertilizer

than area (A) because it tends to be leachy and droughty. At a depth of a few feet, the heavier soil of area (A) is reached. Very heavy applications of water on this soil could be expected to produce ponding where the light overburden reaches to heavier cemented soil beneath. If irrigated, water on this area should be carefully managed to avoid damage to roots. Artificial drainage may be advisable.

City Of Jidda, Saudi Arabia

Like area (C), the western portion of area (B) overlies heavier, cemented materials. The surface soil, from 18 inches to three feet or more, consists of leachy, stratified, water-laid materials. This overburden is leachy and droughty with a high water requirement and a minimum of plant nutrients. If irrigated, water management on this area would require special skill and attention. The eastern portion of this area is leachy and droughty with the heavy subsoil lacking or so deep that it would not influence land and water management. With an abundance of water and fertilizer, trees should make good growth on this soil. With cultivation of any crops, special effort should be made to maintain high content of organic matter and keep this soil protected against wind and water erosion and leaching with the use of close-growing cover crops.

2 mile

Area (D) is loamy fine sand. Good yields could be expected on this area with a rather heavy application of fertilizer and good water management. Both fertilizer and water requirements would be a little higher on area (D) than on area (A). The soil could be improved by maintaining a high content of organic matter.

Area (E) is rather light in texture. This area is mostly sand with much wind blowing. The soil is slightly cemented but tends to be very leachy and droughty if irrigated. Maintaining a high content of organic matter and keeping close growing crops on the land would reduce leaching if this area is irrigated. Fertilizer and water requirements of this soil would be high if developed for irrigation.

Conclusion

5 mile Area (D)

In Saudi Arabia, fertilizers are high priced, so maximum returns on any investment is necessary. The greatest response of crops to fertilizer, water, and land management can be expected on area (A). All other areas tend to be less satisfactory to develop for irrigation because of the skill required in irrigating, droughty or leachy condition or both, high fertilizer requirement, and difficulties in land management.

Area (E)

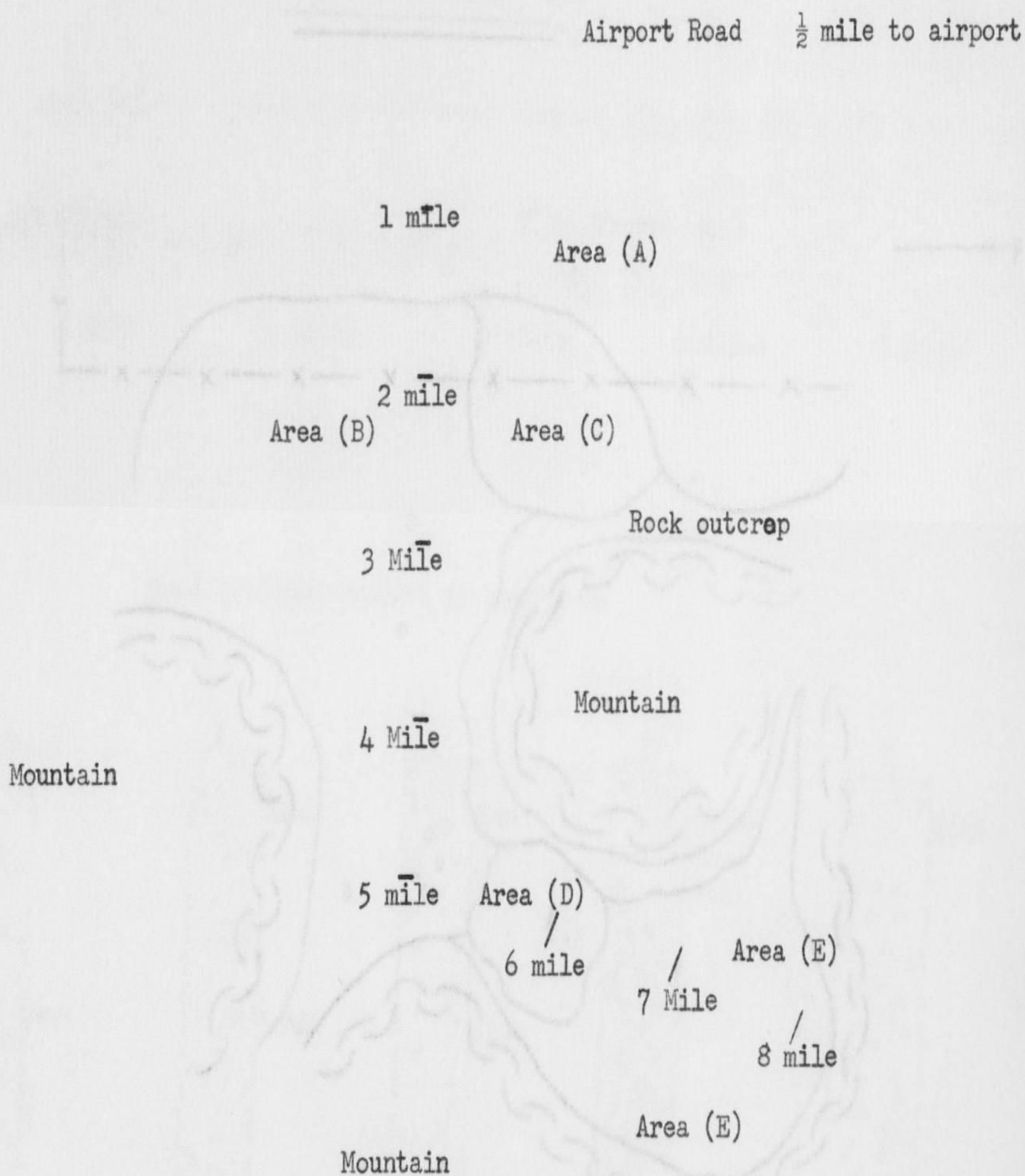
Quality and amount of irrigation water will have much influence on size and location of the area to be developed. If the salt content of the water continues high, water requirement by crops will be greater than if the salt content is low. If there is an abundance of water, it may be advisable to irrigate enough leachy soil to utilize all the water.

Since this farm is located at Jidda, handling and shipping costs would be at a minimum and labor should not be a problem. Comparatively high costs of management and some soil and water deficiencies would be offset by convenience of location.

Dated June 22, 1954 by Madani and Gibbs

George F. Gibbs
Soils Specialist

City Of Jidda, Saudi Arabia



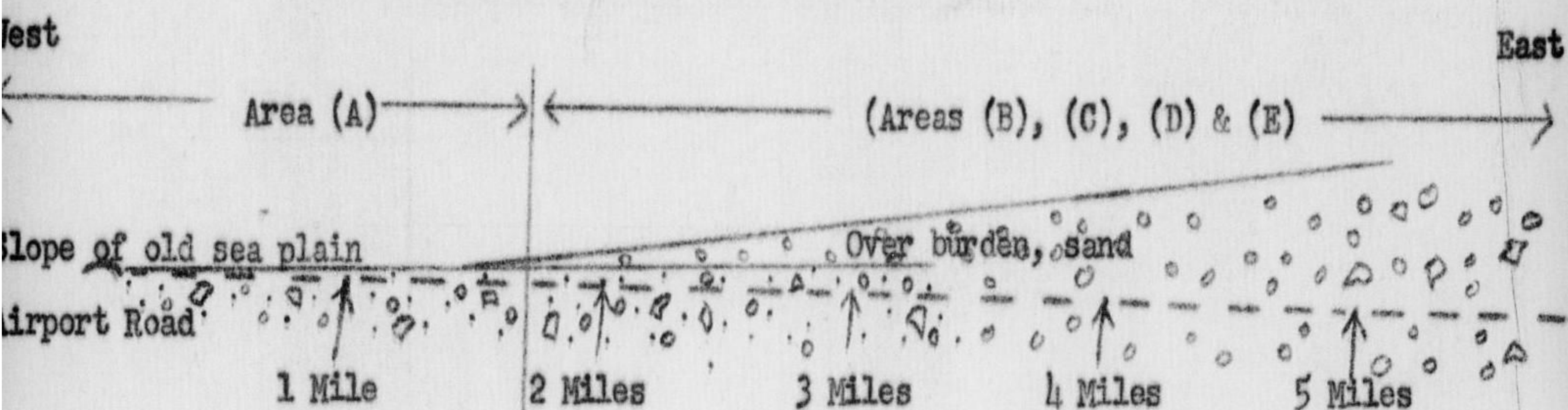
Sketch Map - Not to scale

Farm of Shaikh Abdullah Sulaiman

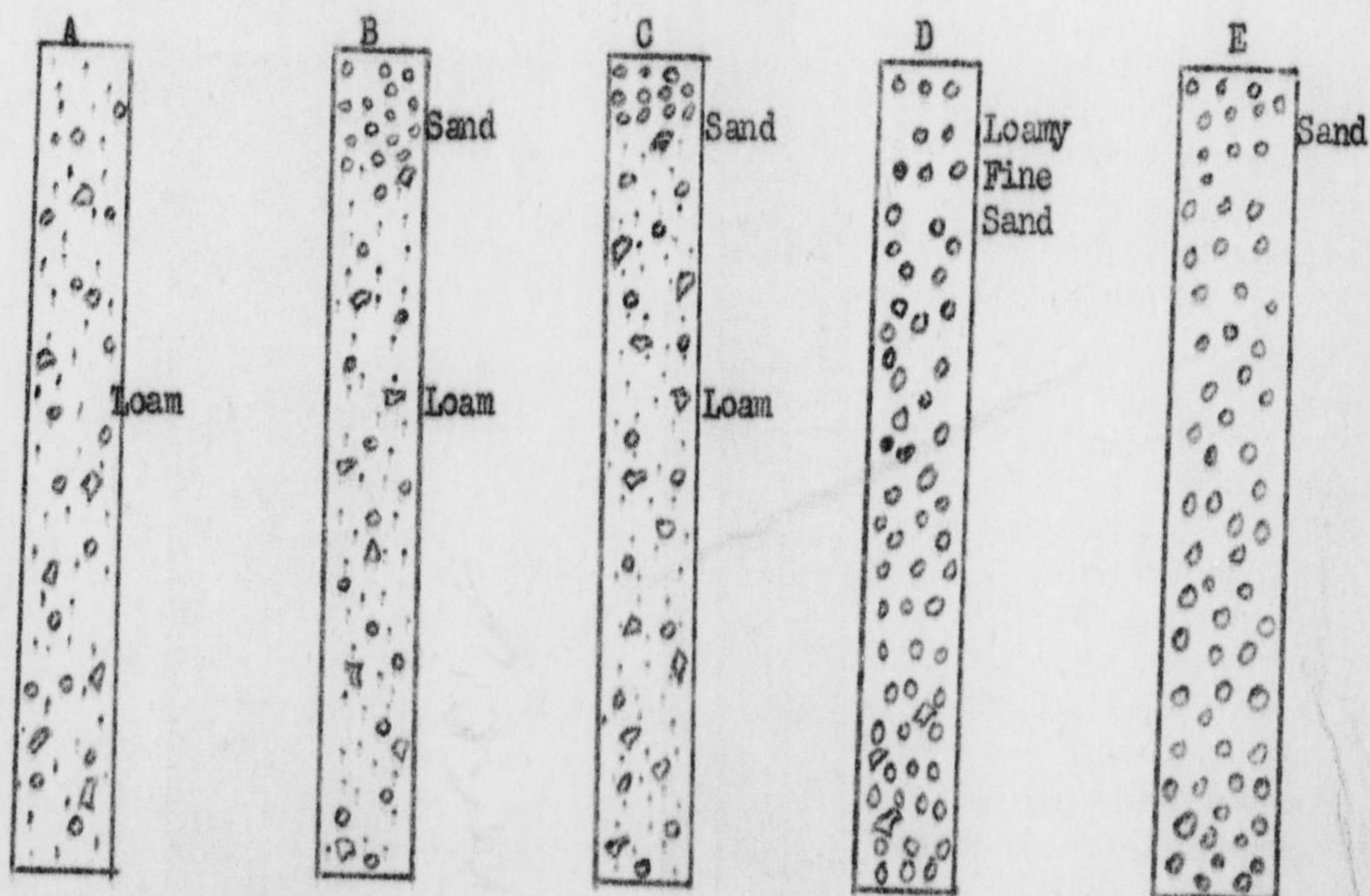
SOIL REVIEW

Mapped June 22, 1954 by Madini and Gibbs

East to West Diagram of Soil Profile



Soil Profiles Typical of Each Area



American Embassy
Jidda, Saudi Arabia
June 27, 1954

MEMORANDUM

TO: W. J. Edens, Chief, Agriculture Division
FROM: George P. Gibbs, Soils and Agricultural Research Specialist
SUBJECT: Monthly Progress Report - June 1954

Army maps of Saudi Arabia were mounted on cloth for field use when further field work is to be continued.

Soils were briefly examined and a report prepared on the farm of Shaikh Abdullah Sulaiman to assist in planning future land and water management on this farm.

Much of this month was taken up training an Arabian to service air conditioners and replace air conditioners where breakdown made replacement necessary.

Equipment has not yet been received with which to make moisture determinations, wilting point, and other soil and water studies.

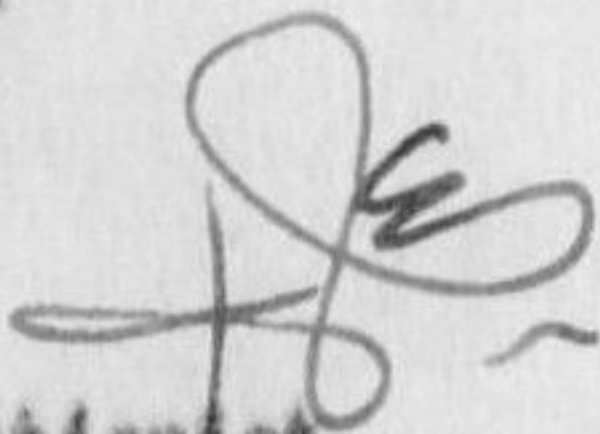
GPGibbs:o

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American Embassy
Jidda, Saudi Arabia
June 28, 1954

MEMORANDUM

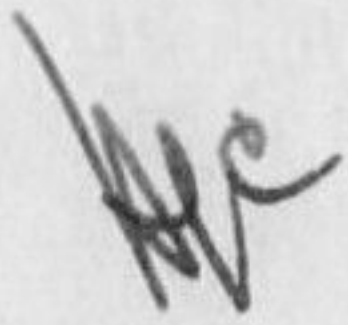
TO : Dr. W.J. Edens, Chief
Agriculture Division

FROM : H. E. Schwan 
Desert Range Conservationist

SUBJECT: Monthly Progress Report - June 1954

There has been no accomplishment to report. The month of June was spent on a report on Arabian ranges, on correspondence and on other unproductive office work.

HESchwan:mep





UNITED STATES OF AMERICA
OPERATIONS MISSION TO SAUDI ARABIA
POINT 4

American Embassy
Jidda, Saudi Arabia
June 28, 1954

MEMORANDUM

TO: Mr. Harland J. Corson, Director
FROM: W. J. Edens, Chief, Agriculture Division
SUBJECT: Monthly Activity Report - June 1954

CRITIQUE

June has been another month of waiting for project/signatures. Consequently technical assistance activities are practically nil. Study and assistance have progressed on a one-way route to the point where it appears folly to go further without active cooperation and assistance by the Ministry of Agriculture.

OPERATIONS SUMMARY

Mr. Parker made a trip to Asmara and Addis Ababa to study livestock programs under way in that country, and to investigate the supply of feeds that could be shipped to Saudi Arabia. Oil meals or cake, Durra and barley are in abundant supply in Ethiopia. Fish meal can be obtained in Asmara.

Mr. Gibbs has made a soils study of Shaikh Abdullah Sulaiman's farm and made a report to him to be used in planning future land and water management.

Mr. Schwan is writing a report on Arabian ranges.

Mr. Rountree has continued to work with farmers in Wadis Khulais and Fatima relative to seeds distributed earlier. Results thus far have been good. Rountree is now making a survey of agronomic problems in the Eastern Province.

Mr. Barham continues to visit and advise with the farmers of Hofuf. The vegetable seeds distributed gave good results in most cases. There is much over-irrigation by the farmers. Mr. Barham is attempting to get some of the farmers to demonstrate the benefits of less irrigation.

PROGRAM DEVELOPMENT

Draft copies have been made of two project agreements, an agricultural school and an agricultural extension service - to be proposed to the Agriculture Ministry for FY-1955.

WJEdens:o

ag Dept (2)

Supplement

Preliminary Soils Review - farm of Shaikh Abdullah Sulaiman
Jidda

Mapped June 22, 1954

Referring to conclusion, paragraph 2, of the preliminary soils review of the farm being developed near the airport by Shaikh Abdullah Sulaiman, Dr. Glen Brown has made the salt analysis results available. Following is a discussion of this analysis.

Old dibble north of Mecca road - now being reppened:

Water quality - June 1954

<u>Ca</u>	<u>Mg</u>	<u>Na (plus K)</u>	<u>HCO₃</u>	<u>Cl</u>	<u>SO₄</u>	<u>T.S.S.</u>
112	110	1850	280	2116	1480	5948

The above figures express parts per million of total soluble salts (T.S.S.). Expressed in another way, one acre foot of water weighs approximately 2,720,000 pounds. This would give us the following information, using the above figures:

If 12 inches of water were applied at an irrigation, this would deliver about eight tons of salt per acre. Twelve inches is seldom applied at an irrigation, but where salt is high, heavy applications are necessary to leach salt away and to furnish the abundance of water necessary for the plant to compete with the salt in the water.

Total soluble salts in this water are so high that crop failures due to total salts can be expected. Sodium salt alone is so high, and is not balanced with an equal amount of calcium and magnesium, that it would soon develop a condition in the soil making it completely useless for irrigation.

George P. Gibbs



UNITED STATES OF AMERICA
~~TECHNICAL COOPERATION ADMINISTRATION~~
USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

June 1, 1954

MEMORANDUM

TO : Mr. Harland J. Corson, Director
USA Operations Mission to Saudi Arabia

FROM : W. J. Edens, Chief
Agriculture Division

SUBJECT: Monthly Report - May 1954

CRITIQUE

Project agreements for 1954 have not been signed by the Minister of Agriculture. However, this is expected to take place in the near future. Time has become very short for using FY 1954 funds, and the continued delay tends to create personnel problems.

May is the month of Ramadan and activity by division personnel and their counterparts has been almost at a standstill. Project agreements to establish a school of agriculture and an Agricultural Extension Service are being written for discussion with the Minister of Agriculture under the proposed 1955 budget.

Operations Summary

The study of Date Varieties by Mr. Nixon is ready to be bound when mimeographing of manuscript can be completed. The bulletin he has written on "The Culture of Dates in the Eastern Province", is now being critiqued and will be ready for printing in the near future.

Mr. Parker is in Ethiopia studying livestock and problems encountered there. Earlier in the month he opened the pit silo in Wadi Khulais to demonstrate to farmers how succulent feed can be provided livestock at any time of the year and how green feeds in season can be preserved in this manner. This demonstration was on the farm of a leading Shaikh in the Khulais community.

At the request of Mr. Mohammed El Mousley, a Jidda merchant, Messrs. Rountree, Parker, and Gibbs made a survey of this farm and recommended a system of farming to follow.

Mr. Rountree has continued to work with the few farmers in Wadi Fatima to whom seed and fertilizer were distributed. Results have been satisfactory.

Mr. Barham at Hofuf reports that farmers are well pleased with the seed furnished to them for planting. Vegetables from these seeds sold on the local suq have created much favorable comment.

Having visited important farming areas, Mr. Gibbs is making plans for soil and water studies to be conducted at Wadi Khulais, Hofuf, Qatif, and Dammam. It is planned that much time will be given to instructing farmers in water management.

The Water Spreading and Range Management Leaders Conference held at Amman, Jordan, was attended by Schwan, Edens, and Ibrahim Mohammed Abu Boutain, counterpart to Mr. Schwan in desert range management.

Program Development

None, other than to continue spade work preparatory to implementing project agreements.

Agreements and Requests

As yet, the Agriculture Division has not experienced the execution of a project agreement. All of the 1954 projects are under current negotiation by the Country Director alone and Saudi officials at Riyadh.

(2)

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

May 25, 1954

MEMORANDUM

TO : Dr. W. J. Edens, Chief,
Agriculture Division

FROM : B. H. Rountree, Agronomist *BHR*

SUBJECT: Monthly Progress Report, May 1954

A trip was made to Wadi Grand at the request of El Mously, one of the local businessmen. He is interested in developing a small live-stock and poultry farm with the local people in one of the villages in this wadi. He is also interested in crop and vegetable varieties that can be marketed in Jidda.

The land in this particular area is deep and fertile and there seems to be an abundant supply of good water. There are good possibilities for improvement of vegetables and crop varieties. According to Mr. Parker, FOA Livestock Specialist, a livestock and poultry program would work very nicely in conjunction with the crops.

A follow-up visit was made to Wadi Fatima. Farmers in one group are very enthusiastic and anxious to get further assistance on fertilizer and improved seed. The crops planted and fertilized with commercial fertilizer showed much more growth than those receiving no fertilizer.

Inactivity of the people because of fasting has slowed down operations.

BHRountree:mep

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

May 25, 1954

MEMORANDUM

TO : Dr. W. J. Edens, Chief,
Agriculture Division

FROM : George P. Gibbs
Soils and Agricultural Research Specialist

SUBJECT: Monthly Progress Report, May 1954

During this month, two days were spent studying soil and water problems on a farm at Wadi Khulais. The report and map were developed in the office.

Materials have not yet arrived with which to continue soil studies at Kilo 10 or to do additional soil studies in other areas under investigation.

Reports were completed and are now in the process of being typed and drafted covering soil and water studies accomplished in Wadi Khulais and in the Southern Tihama.

GPY

GP Gibbs:mep

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

May 25, 1954

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: T. O. Parker, Animal Husbandry Specialist

SUBJECT: Monthly Progress Report - May 1954

During the month of May we have been waiting for some word of signed project agreements which would permit us to start work on the various proposed projects which have to do with livestock and poultry improvement. To date nothing has been done to activate the plans we have proposed for SAG.

Last month we filled the demonstrational trench silo in the Khulais Community. The owner was in need of the feed as quickly as possible and Mr. El Bakrey and I agreed to return in 10 days to open the silo so he could have feed for his animals. We made a date to return on May 9 and Mr. El Bakrey was to meet me at our office at 6:30 A.M. I waited until 8:30 A.M. and went on without him, thinking no serious problem would arise that would require interpretation. In this I was wrong, because the owner of the silo felt if the silage were "cured", it would be all right to take it all out of the trench and stack it. I tried to tell him, through our cook, that it would ruin if he did. I think he finally understood and I am mentioning this to bring out the fact that if we are to do any work in this country, it is absolutely necessary to have a counterpart who is interested and can be depended upon, or someone who can interpret. I see no use of trying to do anything with the present counterpart. I have been unable to see him during the month of May. When I saw him last, I talked with him about plans for the proposed livestock and poultry station, and he showed no interest whatsoever, saying, "They will never get it built this year or next." It seems that instead of promoting a livestock and poultry program, he is "dragging his feet."

During the time we were building and filling the silo at Khulais, it was the opinion of the natives that the owner had gone crazy when he permitted "The Americanos" to bury all his feed and let it rot. Fortunately for all of us, the silage was as good as I have ever seen. When we opened it, the owner grabbed an armload and took it to his oxen. I was afraid they wouldn't eat it at first but they helped us out by eating it all and called for more. The old man said, "Tamam -- wadged tamam" (Good - very good). The neighbors were called in and before we left, we had a group of 25 or 30

farmers present. It is my opinion that there is enough grain sorghum in the Khulais Community to feed out an additional 2000 lambs from 40 to 80 pounds if the crop were ensiled. I believe there will be several silos built and filled next year if we can have an extension man stationed there and all of us doing some follow-up work.

I have visited the local sheep market seven times this month and have seen the method of sheep marketing.

I have also been working on detailed plans of the proposed station and ordering equipment and supplies for our program, but I understand these orders have been held up while awaiting word on what is to happen to our proposed projects.

JP

TOParker;o



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

ADDRESS OFFICIAL COMMUNICATIONS TO

To: W.J. Edens, Chief, Agri. Div.

From: Fred A. Barham, Ext. Specialist.

Subject: Monthly Report. April 20, May 20, 1954.

I was told in Washington and again after arriving in Arabia that I should be careful in what I told the Arab farmer about methods of irrigation, as they had forgotten more about irrigating than the Americans knew. It is certainly too bad that they forgot because they do not know very much about it now.

When I first saw the methods of planting and irrigating I wondered how they kept from having trouble with diseases such as root-rot, damping off, powdery mildew and rust. I have the answer now; they have plenty of troubles.

There is no way to keep from having this trouble when plants are growing in a ditch, below the water line, and then watered every day. In some cases twice a day.

Mr. Hassuneh and I visited all the farmers, to which we had given seed, just before Ramadan. Since that time we have visited a number of other farms. Many by request.

On every farm visited we found that the farmer was having trouble with the above mentioned diseases. After talking with them we found that they had this trouble every year.

We have asked many farmers why they use their method of planting and watering. We all ways get the same answer. That is the way it has all ways been done here.

In several cases we have got the farmer to reduce the number of waterings and in every case a lot of the trouble was stopped. It was not possible to completely remedy the trouble due to the plants being below the water line in the ditches.

All the crops growing from seed given out by us are doing as well as the native varieties. On a few farms there had been some locust damage but plants were not completely destroyed.

The only vegetables from our seed that have come into production, up to date, are radishes and squash. I was lucky enough to see the first White Icicle and Scarlet Globe radishes come on the market in Hofuf. There were many persons ganged up around them and they were sold out in a very few minutes.

The squash was a different story. American varieties were much smaller than the Arab varieties but of much better quality. Even though the large, poor quality, native varieties sold where the American varieties did not. It will take a lot of education to make the Arabs appreciate quality rather than quantity. They have used the poor quality to long. I even find them using one plant that we classify as a gourd not fit for human consumption.

In making farm visits this month I have found much insect damage both from chewing and sucking insects; there not being any insecticide available there was nothing we could do to help the farmer.

This insect damage was on alfalfa, vegetables and citrus. Thrip on alfalfa was causing the most damage. If there were more citrus trees in the area scale insects would be a big problem as nearly every tree I have examined I have found some scale. In a few cases the infestation was so heavy that the trees were about dead.

The first few days of Ramadan were spent in the Dhahran, Al Khobar and Dammam areas, due to the fact that there was very little I could do at Hofuf.

I made several field trips with Mr. McAteer, of the Reynolds co., to look over the demonstration sprinkling irrigating system that he has put on a farm near Al Khobar. There is to be a large field day at this demonstration June 18th.

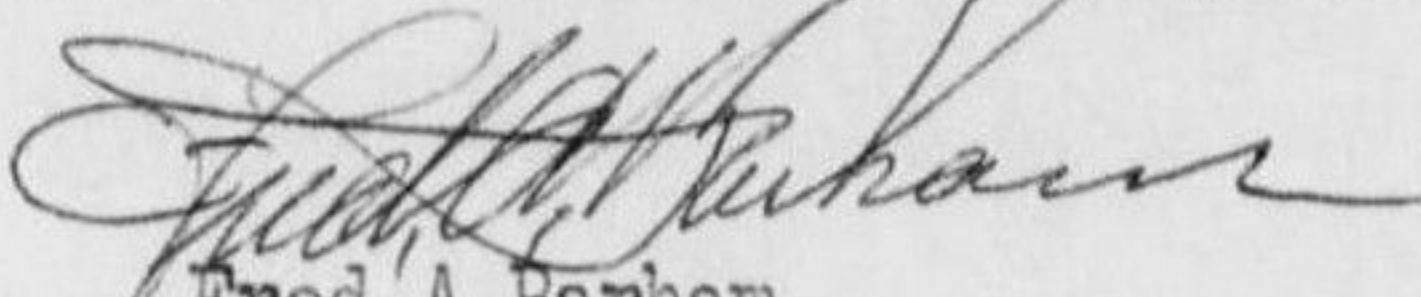
I made several field trips with Mr Hamilton, of the Aramco Co., to look over land where he would like for the FOA to establish a drainage demonstration. I was very disappointed to find the land of poor quality and in ~~fact~~ my mind it would not be possible to lower the water table over a few inches.

It looked to me as tho they want some land available near Dammam where they can grow alfalfa for the dairy located on the Royal Farm near Dammam. The Aramco has taken over the management of this farm and have to put it on a paying basis or call it a failure.

During the first part of the month I was with Mr. Thrailkill, Point 4 locust control. We were visiting with the Entomologist at the Aramco Co., when they received a call from the Amir of the El Hasa asking for assistance in locust control in the northern El Hasa.

Mr. Thrailkill and I made a trip to Dammam along with Mr. McDonald, of the Aramco Company, to visit the Amir and explain to him how the Point four could assist Arabia with this problem. I do not know whether this went any further than this or not.

There is more than enough work to be done in this part of Arabia to keep all the Point four busy for the next several years. The land is available with plenty of water to use on it. All we need are some signed agreements and the personnel.


Fred A. Barham
Extension Specialist.

APC
April 22, 1954

MEMORANDUM

TO : Dr. W. J. Edens, Chief
Agriculture Division

From : T. O. Parker
Animal Husbandry Specialist

RE : Monthly Report- April 1954

During the month of April my time has been distributed as follows: April 1-5, office and getting ticket from SAG to go to Dhrahan. 6-20 spent in Hofuf, Dammam, and Al Kobar. April 20-22, Office.

I accompanied Mr. Barham from Jidda to the east side on April 6. We went to Hofuf on the 7th. While in Hofuf, I was much impressed with the way the people are accepting Mr. Barham. To date, he has been getting acquainted and it is his hope that a project agreement can be signed soon so he can secure the necessary requisites to doing good extension work. Mr. Barham and I spent some time in looking over the SAG farm there with the idea of using it as a center for demonstration of better farming practices. It seems to me, we can do an effective piece of work there and it is my recommendation we equip this farm for facilities to care for 3 or 4 dairy cows, 8-10 milk goats, 300 hens, and place to keep sires which we are in the process of distributing. We have a wonderful opportunity of trying our idea on the feasibility of raising poultry in the date gardens.

I have several recommendations to make in regard to aiding Mr. Barham in his work. It seems to me he has made excellent progress and will make more, if and when a project agreement is signed. The following items or conditions will aid him materially:

1. His counter-part only uses very poor English and Mr. Barham could do more if he had a competent interpreter.
2. There seems to be a lot of emphasis placed on drivers license on the east side and it seems to me it would be a good idea to ask SAG for a driver-mechanic to be assigned Mr. Barham.
3. Some thought should be given to getting Mr. Barham better transportation. The present Jeep Station Wagon is in bad need of repairs and since he has no other method of transportation it is very necessary that the car he drives be a good one.
4. Some arrangements should be made to make it possible to get his car repaired and or serviced.
5. Living conditions are poor, but with a little work and the purchase of a refrigerator and air conditioner, he could make his place liveable. It certainly isn't at the present time. It couldn't be classified as a very good camp.
6. It seems to me that we should try in the future for one or more of the specialist or another Extension man be stationed with him. It would help him a lot if one of the specialist could spend a part of each month there. There is plenty of work to be done and besides help his moral.

The Hofuf area has 10,000 milk cows, 8, 000 sheep, 8000 donkeys. The milk goat numbers is unknown. We found much interest in poultry and the farmers feel the need for better sires.

After leaving Hofuf, we spent some time with Mr. Mohammed Gasobi---a merchant in Al Kobar. He is interested in developing his farm and seemed to appreciate the help we were able to give. This could be an entree into working in this area.

While in the Al Kobar area we talked with Mr. Hamilton of Aramco and Mr. McInteer of the Reynolds Aluminum Co. Also aided Mr. McInteer with setting up his sprinkler system. Mr. Hamiltons attitude is unchanged and his remarks and discussion will be covered in a seperate memorandum.

I have seen quite a little on this trip and would like to return to do more specific work, once we get a project agreement.

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

April 25, 1954

MEMORANDUM

TO: Harland J. Corson, Director
USA Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - April 1954

CRITIQUE

Project agreements for 1954 have not been signed by the Minister of Agriculture. This is expected to take place at any time since the Council of Ministers is now in session. Activity by personnel of the Division continues to be exploratory, and assistance to a few farmers in Wadis Khulais and Fatima, as well as at Hofuf.

The Division was visited by a Range Management and Water Spreading team consisting of three specialists from the States. Much of their planned assistance was nullified by having their travel restricted while in Saudi Arabia.

OPERATIONS SUMMARY

Activities during April have been almost at a standstill except for further exploratory studies. Project agreements for 1954 await signature by the Minister of Agriculture.

Mr. Gibbs completed his visit to the Asir-Tihama area where he made a study pertaining to soils, crops, livestock, available water and food supplies. Time was spent with Dr. Alvin D. Ayers, Soil Scientist, U.S. Salinity Laboratory, Riverside, California.

Mr. Parker accompanied Mr. Barham to Hofuf where an intensive study of livestock conditions was made. There was much more livestock in this oasis than was expected. Mr. Leo F. McAteer, representative of Reynolds Metals Company, was contacted to learn what success he was having with the aluminum foil experiment at Al Kharj.

Mr. Rountree has continued work with a few farmers in Wadis Khulais and Fatima. Corn side-dressed with 16-20-0 fertilizer is responding very well, and one farmer, at Mr. Rountree's suggestion, has begun spreading

organic matter over a portion of his crop land. Alfalfa plots top dressed with 16-20-0 have shown outstanding response. The estimate was that growth was three times that of growth on untreated plots. Fertilized vegetables showed definite response, but not as pronounced as on alfalfa.

Mr. Schwan spent the first of the month preparing for the visit by the Range Management and Water Spreading team from the States. This team consisted of Dr. Galf Asmodt, U.S. Department of Agriculture, and Mr. Floyd Larson, Chief, Branch of Soil & Moisture Control, Bureau of Land Management. Dr. Ayers collaborated. Due to delay of translation and transmittal of letter by the Chief of Division to the Minister of Agriculture at Riyadh, the local official in charge of the Ministry office requested that the travel of our visiting team be delayed until he could communicate with the Minister. A few short trips were made to points in the vicinity of Jidda, but the main field trip was made impossible due to slowness of hearing from the Minister. Approval was finally received from His Highness, but the team had made plans to go on to Iraq and Jordan in order to better utilize its time.

It should be stated that the Chief of the Agriculture Division was not notified of the visit of the above Range Management and Water Spreading team until about one week before its arrival. The Mission should have been notified at least one month earlier so that adequate time would have been available for clearing matters with the Ministry.

Mr. Robert B. Thraillkill, Assistant Director of the Regional Locust Control program, visited the Mission for the purpose of offering to the Ministry for a limited time its facilities and technicians in supplying a demonstrational control unit for various crop insects in the Al Kharz and Riyadh areas.

PROBLEMS

1. Getting 1954 project agreements signed by the Minister of Agriculture.
2. Making the best use of all personnel concerned.
3. Housing for Mr. Barham at Hofuf.
4. Improved transportation for Mr. Barham at Hofuf.

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USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

1 AC
April 22, 1954

MEMORANDUM

TO: Dr. W. J. Edens, Chief
Division of Agriculture

FROM: B. H. Rountree *KKR*

SUBJECT: Monthly Report - April 1954

A trip was made to Hadashan to visit the SAG Agriculture Station and to become acquainted with the work area. The station at Hadashan is practically abandoned. There were three fields being used for tomatoes, cabbage, and sweet melons. Also, a part of the area is in a date garden. The rest of the irrigated area was grown up in weeds and annual grasses. Water is plentiful at this location and the soil seemed very productive. There was only one laborer working on the station at the time of our visit. It is the plan of the SAG to rent this land out to local people and allow them to farm it.

The Emir at Hadashan seemed very friendly and was anxious to get improved seeds and fertilizers for his people. He has a very good farm on which dates, bananas, alfalfa, and assorted vegetables are being grown. He has a good supply of water and the soil seems very fertile.

The Dekhiel farm in Wadi Khulaie was visited with the water spreading team. This farmer had side dressed some corn with 16-20-0 that was doing very well. He was also spreading organic matter over a portion of his land. This is the first time that I have observed this being done in Saudi Arabia. I believe that it should become a general practice and should be encouraged at every opportunity. The proposed demonstration farm was examined by a representative of SAG and the water spreading team. It was the consensus of opinion of the group that the site was satisfactory.

A trip was made to Wadi Fatma with Counterpart Hojak to observe what had been done with the seed and fertilizer that had been distributed about four weeks ago. The alfalfa plots that had been top dressed with 16-20-0 showed outstanding response. The plants were vigorous and very succulent looking. It was estimated that there was three times as much growth on the fertilized area as compared with the untreated plots. The fertilized vegetables showed definite response, but not as pronounced as on the alfalfa.

Another group of farmers in Wadi Fatma had planted all of the seed that had been distributed. All of the seed had come up to a good stand. Observations will be made periodically.

BHRountree:mep

Carson
Mc

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USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

April 22, 1954

MEMORANDUM

TO: Dr. W. J. Edens, Chief
Division of Agriculture

FROM: H. E. Schwan
Desert Range Conservationist

SUBJECT: Monthly Report--March-April, 1954

The last report ended with my return from Riyadh. Preparations were begun immediately for the planned trip to the Qasim, Hail and Al Ula. There was a delay of several days while waiting for the return of the power wagon from the Tihamah trip, and an additional delay after its return to make repairs and to service it. At this time, the first information was received relative to the impending visit of Messrs. Aamodt, Larson and Ayers. Consequently the Qasim trip was cancelled, since it appeared that the time allowed by the three man team was inadequate for them to accompany us.

A new schedule was developed, featuring a three-day trip to Khulais and a six day trip to Taif. H.R.H. Prince Sultan and local officials were notified of the visit and plans for the projected trips. Much of three days was taken up in meeting incoming planes, beginning with the announced arrival date of April 5. On April 7, we received a wire that the team would arrive on the 11th. Meanwhile, food for nine men for six days was purchased, equipment was put in order, the authorities at Taif were notified, a wire for field requisitions of gas was sent to Taif, a four-man crew was assembled and asked to stand by, supplies and equipment were loaded and everything was in readiness to begin the Taif trip as scheduled on April 14. A wire was received from H.R.H. Prince Sultan, raising questions and restricting the team to the confines of Jidda. However, one-day trips were made to the Kilo 10 grass plot, to possible water-spreading areas on Wadi Fatima, and to Wadi Khulais. Finally, the Taif trip was approved by Prince Sultan on April 18, but the three-men decided to follow through on a change in plans and departed on April 20 instead of April 24, as originally scheduled. The Taif trip was cancelled.

While some benefit was gained from the visit in discussions and the short trips, in general, the visit did not help us much because of inability to go into all inter-related problems in a definite area, as had been planned for Taif. In my opinion, the entire difficulty and miscarriage

of plans could have been avoided, to the benefit of all, if this Mission had been notified of the plans of the team, together with approximate dates, a month or more in advance. There would then have been adequate time to clear everything with the interested Ministries.

Accomplishment for this month was low.

At the end of the monthly period, preparations were being made for attendance at the Middle East Leaders' Conference at Amman, Jordan.

HESchwan:mep

Jidda, Saudi Arabia,
April 20, 1954.

Ms. Corson

TO: Dr. W. J. Edens, Chief,
Agriculture Division.

FROM: H. E. Schwan,
Desert Range Conservationist.

SUBJECT: Planting trees on Arabian Coastal Plain.

Reference is made to Director Corson's inquiry about the feasibility of planting trees on the Red Seas Coastal Plain.

Samr trees (*Acacia tortilis*) now grow in this area. However, they seem to grow only in certain localities and we know very little about their site requirements. We have observed that the Sidr tree (*Zisypus spina-christi*) seems to require more moisture than is found in the average site. We also know that several additional species of trees come in as one goes south and as the normal expected rainfall increases.

Wood is vital in the Arabian economy. The stands of trees have been and continue to be over-cut above the sustained yield of wood products in several areas. It is quite evident that the arr-arr (*Juniperus* sp.) forests have been eliminated on some of the mountains above Taif.

I believe there is a possibility that trees can be established in additional places near Jidda if planting is done in late fall and if the trees are watered until the roots take hold. Better opportunities for practicing forestry exist in the higher rainfall areas in the mountains. In addition, reforestation is needed to return the important watersheds to an acceptable condition. This is a formidable undertaking, but must be done eventually if excessive floods and recharge of ground waters is to be controlled. In addition there is a very great opportunity to extend the use of athil (*Tamarisk orientalis*) for dune stabilization. The very successful use of athil at Anaiza points the way.

In the vicinity of Jidda tree planting must be initiated in fenced areas, to protect the young trees from goats and camels. This limits the number of places where experimental plantations may be started.

It seems quite probable that the Samr can be successfully planted, but we do not have seeds at this time. The Sidr should also be tried, in view of the successful plantation at Sabiya. It may be that if seedlings are watered the tree will grow in drier sites than where it becomes naturally established. I have made inquiry about the outlook for mesquite and Dr. A. Amot tells me that the U. S. tree has proved very successful in Egypt. It is possible that we may be able to get nursery stock for trial planting from Egypt, and I will follow up on this. *Prosopis spicigera*, a spiny shrub from Baluchistan, appears to have promise. I have on hand some seed of *Eucalyptus gomphocephala*, a drought-enduring species, and will get some started at Kilo 10, although I believe there is a better possibility at Taif. Tree-Alfalfa (*Medicago arborea*) should do well here, and I have a few seeds.



UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

January 31, 1954

REPORT ON THE EL HASA OASIS

by

Fred A. Barham, Agricultural Extension Specialist

From January 16 to January 25, Mr. Gibbs, Soil Specialist, and I made a study of the El Hasa Oasis.

Even though we camped wherever nightfall overtook us, we were unable to completely cover the Oasis in this time. This was due to several reasons. The Oasis consists of approximately 27,000 cultivated acres, with approximately 20,000 more adjacent that have been in cultivation at some previous time. The lack of bridges across canals requires much "back tracking" in order to get to different communities. Then there is the old custom of visiting with the Amirs and drinking tea and coffee.

Approximately 25,000 acres of the cultivated land are planted to dates, most of which are interplanted to other crops. The other 2,000 acres, along with the interplantings, are planted to vegetable crops, alfalfa, rice, barley, some wheat and a few other kinds of fruit.

The irrigation and domestic water is obtained from springs, dug wells and a few drilled wells. Much of the water in the south part of the Oasis is warm. Most of the water comes from flowing wells and springs, but there are some wells on the higher land being pumped with either diesel or gasoline engines while others have the water lifted by means of donkeys and goat hide bags. A number of water rights allow the farmer only to use the latter method.

Even though there is a shortage of food in the Oasis, we found very few dairy cows and poultry and they were of very poor quality. The number of livestock is kept at a minimum on account of no feed being produced outside of green alfalfa hay. All the grain produced is being used for human consumption.

There are about forty-five towns and villages in the Oasis. Hofuf, with a population of approximately 60,000, is by far the largest. The rest range from 1,000 to 6,000.

Mr. Gibbs and I were very surprised to find schools in most of the towns and villages. We were told that there were six schools in Hofuf, which included one high school and one for girls. The ones in the villages only have five years of elementary work.

*This is a very good
informational report*
HAG

There are many problems in the Oasis, some of which I will briefly describe.

One of the most important is that of drainage, which is covered by Mr. Gibbs' report, along with other problems such as salt conditions and the proper use of water.

There are several problems with date production such as too thick plantings, over watering, high water table, lack of fertilizing, improper varieties and poor methods of harvesting and marketing. Some of the palms are badly infested with scale insects.

Vegetable production should be both increased and improved. I find that most of the varieties being used are very poor quality, this being mostly due to saving their own seed rather than securing new seed each year.

Applications of chemical fertilizer are needed and all the soils need humus.

New varieties of vegetables, rice and grain should be tried out on experimental plots and the ones proving successful should be introduced to the farmers.

Speaking of experimental plots, it will take several scattered over the Oasis to serve all the farmers due to the poor system of roads and means of transportation. Many farmers in one community have never been to other communities, even though they are only a few miles or kilometers apart. I believe that most farmers are going to have to see the success of varieties and better farming methods before they will accept them.

I think that a few good sires and a flock of good poultry should be kept at the experimental or test plots. The livestock should consist of sheep, goats and milch cows. Mr. Parker, Livestock Specialist, should spend some time in the Oasis in order to determine what livestock projects should be conducted.

Since large hoes are the only farm implement now being used, some implements such as modern hoes, garden rakes, shovels, push type plows and seeders, Georgia stocks, small horse drawn turning plows and a few small garden tractors could be introduced. The change will have to be very gradual.

The problem of shifting sand dunes should be studied by the Range Specialist to see if they can be controlled by the planting of wind breaks or by replanting of certain areas outside of the cultivated areas.

The need of an irrigation and drainage specialist is acute as there are many problems along this line.

There is one "year round" lake in the Oasis that should, along with large canals, be stocked with fish. This would serve two purposes; one, the furnishing of food, and the other, to help control mosquitoes which are very prevalent in the area - many of them are Anopheles, the malaria carrier.

Another problem that I think Point IV should assist with is the improving and developing of domestic water at some of the villages.

Some health work should be carried on, especially with the control of mosquitoes, flies, and the control of Trachoma.

In order to carry on the educational program by the extension specialists, I believe it would take three or more to cover the entire Oasis. There should be one specialist in charge in order to keep all work coordinated.

FAParham/pa

Mr. Carson
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USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

MEMORANDUM

February 19, 1954

TO : W. J. Edens, Chief
Agriculture Division

FROM: George P. Gibbs
Soils Specialist

RE : Agricultural problems and suggested solutions in parts of Arabia
studied thus far.

This is an excellent report
WJG

Arabian farmers are using too much water when irrigating.

Wherever I have gone examining soils in Saudi Arabia (Khulais, Qatif, Fatma, Dammam, Hofuf, Kilo 10, and Kilo 40), too much water is being used where irrigation is being carried on. Trees, plants, and bacteria are being drowned. Animals and people do not have enough to eat, and mosquitoes are too numerous. From all my observations I am certain this is true and Aramco has a rather accurate record of how irrigation water is being used at Dammam where they found the farmers applying 23 feet of water a year. Compare this kind of water management with tropical rain belts where 15 to 18 feet of precipitation makes it impossible for all but the growth of a few selected forms of life. Palms, alfalfa, tomatoes, squash, millet, etc., on ridges or near drainage ditches look better than those on the floor of the irrigation basin or paddies which serve as the farm field unit. The basin is a miniature border dyked field which usually measures about 18 feet by 50 feet. The border dykes rise from 10 inches to about two feet above the basins.

Many holes were dug and many questions were asked to determine the effect of 23 feet of water on the crops being grown. Live date palm roots were found 20 inches from the base of the tree but at 36 inches, roots were lacking. Trees twenty to fifty years of age which were being over irrigated were shrunked, had small tops, and some had fallen because of lack of supporting roots. Since all trees were planted too close together (date palms 12 to 15 feet apart), some inferior growth and production could be contributed to crowding. Yields were estimated at 5 to 50 pounds per tree. Alfalfa roots were found to fork at 6 inches or less. Many times the tap root did not reach below 6 inches and the average life of the plants is very short. At Qatif and Dammam, alfalfa can be expected to live about nine months. At Hofuf, date palms look better than at Dammam and Qatif. Here alfalfa often lives two and a half years with an average of about two years. Tomatoes, onions, wheat, barley, and other small crops often have yellow foliage and oranges will not grow. Date palms growing on ditch banks had roots intermingling where they were separated by as much as 25 feet. At Wadi Khulais, millet does not put up a second growth from the crown when irrigated to bring on this

second growth. A light rain at the time of harvest often brings on a second growth. The writer believes the plant roots have spent their limited strength in maturing the harvested crop and are then drowned when over irrigated. A light irrigation might be expected to give results similar to a rain.

At Hofuf the farmers put much labor into burning litter which they either buy or gather from the marshes. At times this is carried six kilometers or more on donkey back to the owner's property. There must be a noticeable response to this burning or the farmers would not continue to do it. Here as in all other localities studied, too much water is being used and plants and trees are too close together. As a result of a discussion on the value to be received from burning litter, Guy Hamilton of Aramco had some soil tests made which gave the following results on land receiving ashes and over irrigation:

P₂O₅ about 6000 Lbs. to the acre furrow slice.

K₂O about 4500 Lbs. to the acre furrow slice.

It is not known how the selection of these samples was made, but there is good reason to believe they are representative. It is my belief that the response to burning trash is a result of reducing organic matter to where it does not tie up nitrogen in the fermenting process on the over irrigated land. It leaves the small amount of nitrogen in the soil available for plant use. Judging from the above figures, potash and phosphate are not limiting factors in these soils.

Milk cows may be very desirable for those who can afford them, but in Saudi Arabia the farmer does not have the money to buy the feed to feed, or the know-how to care for milk cows. Any valuable milk cow given to the average farmer without years of training in the feeding and care of such animals will end in severe losses. Goats, sheep, donkeys, and camels have been raised in this country for several thousand years. They can remain in good condition when native cattle owned by the same people are suffering from a poor diet and give about two or three quarts of milk a day. The lactation period of these cattle lasts only three or four months. The farmers are not familiar with the requirements and care of cattle, and feed is not available. Chickens are raised for eggs and meat but the quality of these products is inferior to those in the United States.

Several isolated locations of stabilized sand were found on the desert where sand appears similar to the shifting sand which is approaching cultivated land and appears stabilized with vegetation while the other has sand dunes moving at the rate of six to eight feet per year with great destructive capacity. Because of the minimum of damage that has been done to cultivated land in the past and the potential of the shifting sand which is now approaching villages and gardens, it is my opinion that the stabilizing vegetation has been destroyed within the past several hundred years by over grazing.

Fodder is now being fed to animals which is mostly cellulose where alfalfa is not available. It has little food value in its present form. Large amounts are being wasted by animals which pick it over and then only succeed to exist on it.

The health of the farming people is not good and should receive attention. A healthy man like a healthy animal can turn out more work than a sick one. He can live longer and therefore accumulate more experience as well as devote more time to education.

Suggestions

1. Build turn out gates that can be used to turn water off entering delivery ditches and allow water to flow in the laterals only when needed for irrigation. Irrigate only for the needs of the crop being raised (This would require considerable study and education, but a start could be made immediately). Frequent checking of soil and plant should be the guide to water requirements. Scientific measurements should follow to eliminate errors, select desirable irrigation rates for respective crops, and receive maximum use of water.
2. Concentrate all effort on improving sheep, goats, and camels for dairy, meat, and wool products.
3. Use urea to supply the protein needs for ruminants so they will make better use of feed. If donkeys or other non ruminants are required to eat high cellulose feed, give them the partially fermented feed such as is now being used for high cellulose feeds in the United States. At about 180 degrees, through natural heating, the cellulose is broken down so animals can digest it. Silos may be needed but they take time to construct and are expensive. Months would be required before the results could be seen by the farmer building the silo. The results from the use of urea and heat could be had with a minimum of training on the part of the farmer, as compared with teaching him to use a silo.
4. Use urea on the land to supply the needed nitrogen. With or without proper water management, the response to urea could be seen within a very short length of time. It could be used to supply nitrogen needs for both plants and bacteria which compete with each other where organic matter is not well decayed or too much irrigation water is used. Urea can be used as side dressing at any time nitrogen starvation shows.

Because of lack of research in this country, this should be tried on a relatively small scale at first. Because of the quick response to be expected, one growing season should serve as a guide as to any further steps to be taken.

5. Efforts should be made to try out plantings spaced according to the growth habits of the crop being raised. Wind breaks, sunlight, and drainage should be provided according to the growth habits of the crop in question.
6. Dig shallow trenches and wide contour furrows in shifting sand and also in areas in danger of being over grazed, to be planted to native shrubs and grasses growing in the locality. Camel's foot seems much to be desired by all live stock. Why not make some plantings for grazing purposes?

1/19/52 319 188 170 437 838 195 2121 7.6
51.337 181 07 305 664 183 2800 7.2

7. Establish controlled grazing where possible.

All of these practices are inexpensive, the results can be seen quickly, the results should be very striking, and they could be duplicated by farmers without an extensive training program.

Following is weather and irrigation water information gathered by Aramco. More detailed information is available in the Aramco files if this information is needed. It was thought the following would be useful in ordering seeds or any discussion where weather and water information would be needed. Aramco has been very cooperative and offers the use of any information they have gathered in regard to water, climate, water bearing information, and quality of water. The weather information came from both the records of the Army Air Base and Aramco. Differences are probably due to weather records at the Air Base being collected with greater detail. Aramco also has aerial photographs of the Dammam, Hofuf, and Qatif areas. With the approval of the proper Saudi Arabian authorities, the photographs may be made available to other agencies.

Drilling of water wells in the Qatif, Dammam and Hofuf areas was paid for by the farmers on whose property they are located. In the Dammam area there are about 50 wells producing 96,500,000 gallons per day of water. 95% of the water is used on the land or 23 feet per acre. 54% is run off returning to the Persian Gulf as drainage.

Dammam Wells

Flowing	Date	Na	Ca	Mg	SO ₄	Cl	HCO ₃	T.S.	pH	Specific Gravity
	8/31/53	553	231	76	413	1058	207	2538	7.2	1.003
	10/3/53	559	230	74	429	1051	201	2544	7.2	1.0028
	10/18/53	462	220	68	409	909	204	2282	7.5	1.003
	9/23/53	486	224	66	450	884	210	2320	7.2	1.0025
	9/23/53	485	226	70	446	909	195	2331	7.1	1.0025
	9/23/53	475	224	74	441	909	189	2312	7.1	1.0025
	9/24/53	476	226	71	441	902	195	2311	7.2	1.0025
	8/31/53	476	222	70	437	888	207	2300	7.5	1.002
	9/14/53	468	227	71	446	888	195	2295	7.2	1.003
	9/16/53	475	220	71	454	880	195	2295	7.15	1.003
	9/23/53	496	222	73	490	898	192	2371	7.2	1.0025
Not Flowing	9/14/53	504	224	74	441	944	207	2394	7.4	1.003

Dammam Drains

10/18/53	729	365	171	1106	1345	189	3902	7.8	1.004
10/18/53	630	376	129	1073	1115	183	3506	7.7	1.004
10/18/53	578	426	139	1094	1122	210	3569	7.6	1.004
10/19/53	524	315	104	668	1061	214	2889	7.6	1.003
11/ 2/53	602	291	100	656	1129	210	2988	7.8	1.002

Qatif Wells

1/19/52	319	162	170	437	838	195	2121	7.6
51	337	184	67	365	664	183	1800	7.2

Abgaik Wells

Following is weather data gathered by the United States Air Force at Dhahran, for the years 1946 through 1952, 6 year average by months:

Highest temperature recorded at Dhahran	122°F.
Lowest temperature recorded at Dhahran	34°F.

Following is the weather data gathered by the Arabian-American Oil Company at Dhahran, Saudi Arabia for the years 1938 through 1953:

<u>Year</u>	<u>Average Temperature</u>	<u>Average Humidity</u>	<u>Rainfall inches</u>
1938	80.5	48.6	0.63
1939	79.4	45.7	1.44
1940	81.5	41.5	4.44
1941	81.5	45.5	2.04
1942	82.0	53.5	2.51
1943	79.5	59.0	3.05
1944	82.0	68.0	2.34
1945	80.5	77.0	3.41
1946	71.5	61.5	0.21
1947	80.0	63.0	1.99
1948	79.5	46.5	3.06
1949	78.5	49.7	4.54
*1950	86.0	42.5	0.00
1951	80.0	54.0	2.35
1952	75.5	45.5	1.77
1953	77.4	51.0	4.17
Average	78.3°F.	53.3	2.40

*No records were available for January through June of 1950.

Highest temperature recorded at Dhahran 113°F.
Lowest temperature recorded at Dhahran 50°F.

Within this low precipitation area, large areas of loose sand have remained stabilized with vegetation which has survived the close grazing of camels and goats. All grazing should be controlled to prevent extermination of plant life.

Irrigation water of the quality being used requires a little return flow to prevent salt accumulation on the surface of the soil.



UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

March 2, 1954

REPORT ON FIELD TRIP
TO TAIF AND ADJACENT AREAS

by
H. E. Schwan, Desert Range Conservationist
and
Ibrahim Al Batein, Saudi Arabian Ministry of Agriculture

When we left Jidda, His Highness, Prince Sultan, Minister of Agriculture, requested that I prepare a report of my observations. The following report is being submitted in compliance with His Highness' request.

Trip Itinerary

A trip was made to the Taif area by H. E. Schwan and Ibrahim Al Batein, February 10 to 22, inclusive, with a crew of three. The period of February 10 through 17 was devoted to the Taif area proper. Shaikh Abdul Rahman Siragh and Agriculturist Abdul Aziz Badr were most helpful to us and much of the success of the work in this area was due to their efforts. On the 17th we left Taif for Turaba. On the 19th we visited Kurmah and Ranya, and the 20th to 21st were spent at Bisha. We returned to Jidda the evening of February 22.

Agriculture

A report on the agricultural situation has been made to the Ministry by Ibrahim Al Batein. Consequently, I will confine myself to a few general remarks only. The farms which were visited appeared to be well cared for and in a prosperous condition. The palm trees in the date groves at Bisha appeared to me the finest I have seen in Saudi Arabia.

The outstanding thing which was pointed out to us was the large area of land which could be developed and placed under cultivation. In many places evidences of old irrigation works and cultivation at some time in the past could be seen. These lands are now abandoned. In most places we were told that there was adequate ground water for additional wells. The cultivated acreage can therefore be expanded, at least doubled, with a moderate amount of money but considerable work. These conditions were true on the Wadi Waj, Wadi Shirb, Wadi Liliya, Wadi Turaba, Wadi Ranya, and in the Bisha area.

The Emir of Bisha, replying to my question as to what was most needed in his area, said that there was a great need for diversification. He said new vegetables, fruits and milk producing animals were needed. Much of the

land in this area is devoted exclusively to dates. I assured His Excellency that I would report this condition.

We saw large dams on the Wadi Thumalla, Wadi Massara and Wadi Saysed. I was told that Sud (dam) Saysed was constructed about 1300 years ago, according to an inscription on the rocks. It is level full of silt. Sud Thumalla and Sud Massara are very large structures, partly destroyed by floods and now ineffective. Both of these dams appear to be much older than Sud Saysed. It is significant that islands of silt which remain above Sud Thumalla indicate that the reservoir behind this dam had completely filled with silt before the dam was partly washed away.

I understand that a dam site has been surveyed at Akrima on Wadi Waj. There was also some discussion about a good dam site nearer Taif and the possibility of repairing the Sud Thumalla. The life of any storage reservoir will be short, because of very rapid silting, unless some means is found to control silt movement above the dam. The only truly successful means is through an adequate cover of vegetation in the wadis above. In all cases, the vegetation now is very sparse and completely ineffective for reducing silt movement.

Grazing and Range

The areas near Taif, and especially the high mountains to the west, are very important for summer grazing. I am told that the large numbers of animals which were moved to the Red Sea Coastal Plain following the November rains, move to these ranges near Taif in summer. Grass and other good vegetation is extremely sparse. This country is now producing only a small fraction of the forage which it is capable of under the prevailing rainfall. The lack of vegetation on these hills contributes to excessive silt movement, high seyls, and a reduction in the amount of water entering the soil to maintain the ground water levels in the wadis.

The immense plain, known as Al Aire, was seen between Taif and Turaba. This plain extends many miles eastward and to the north. It has a fairly good cover of vegetation but, I am told, very few wells. It is therefore used mostly by camels, and largely in the spring.

The area between Turaba and Kurmah is hazzim (volcanic plain with small stones). Between Turaba and Bisha it is largely harra (volcanic area with large stones). Between Kurmah and Ranya, and between Ranya and Bisha, the country is very sandy, with little vegetation. Livestock range here is very sparse. I was told by the Emirs of Turaba and Kurmah that grazing is not very important here. The principal opportunity is to plant and produce more forage under cultivation and increase the number of milk cattle, milk goats, and sheep for meat and wool, by feeding such products.

Hemmas (Preserves: Protected Areas)

We saw several hemmas. The largest is the Hemma N'Moor, west of Taif, to which we rode on mules. It is very large and has been established by the tribe. I am told it is closed to the grazing of sheep and goats, but open to grazing of camels, horses, and mules. There is a good stand of grasses and other forage plants, in contrast to the surrounding area outside the hemma. This contrast is very sharp.

The Hemma Saysed was established by the Government for the grazing of Government stock such as horses and camels. It appeared very dry but shrubs were noticeably better than on the outside. Grass was much better on the hillsides. I was told the Hemma Saysed was abolished and the area opened to grazing this year. It is unfortunate that the protection could not be continued until a plan could be made to control the time and amount of grazing so that the forage plants will not be destroyed.

We saw the Hemma Nikht and the Hemma Tallahat. The latter is a small area of rugged mountains closed for the protection of bee plants. There is a large "bee village", operated by one man, for the production of honey. There is very little grass within this hemma, but three species of flowering plants are abundant.

There is also a small area at Sud Thumalla, enclosed by stone fences and not grazed. The contrast inside the fenced area and outside was remarkable. Inside, the grasses were tall and producing seed. Outside, there were few grasses and these were grazed very short.

It was mentioned that there had been a 10 year drought but that more rain had fallen during the last three years. The poor condition of the ranges we saw was blamed on the drought. I agree that a severe drought has visited the land recently. The many dead sallem bushes and other shrubs indicate that unusually dry conditions have prevailed. But the uniformly better condition of grasses and shrubs in the hemmas indicates that much of the range deterioration must be attributed to excessive grazing because drought does not stop at a stone wall or at the boundary of a hemma.

Rainfall

The amount of rainfall and the time of its coming are important in deciding what measures are practical to establish vegetation. Agriculturist Badr has kept records for nearly one year. The results were as follows:

Amount of Rainfall - March 1, 1953 to February 28, 1954

March	0
April 1-15	0
April 15-30	45.5 mm (1.8 inches)
May 1-15	5.0 mm (.2 inches)

May 15-31	99.7 mm (4. inches)
June	0
July 1-15	0
July 16-31	32.5 mm (1.3 inches)
August 1-15	1.5 mm (Trace)
August 16-31	0
Sept. 1-15	13.2 mm (.5 inches)
Sept. 16-30	1.0 mm (Trace)
Oct. 1-15	0
Oct. 16-31	19.7 mm (.8 inches)
Nov. 1-15	0
Nov. 16-30	13.3 mm (.5 inches)
December	0
January	0
February	0

Total 231.4 mm (9.3 inches)

This amount of rainfall, concentrated in the summer growing season at this altitude, is adequate to establish a variety of grass species which may be seeded. It is also adequate to allow the native species to increase and improve in vigor if not grazed or browsed excessively. The latter method is the best and by far the less costly, but some means must be found of controlling the numbers of livestock and the time when any given area is grazed.

Improvement Program

About 50 species of grasses, legumes and shrubs will be tested at Kilo 10 Farm for growth characteristics under the Arabian climate. Planting will be done within a few days. These species will be started under irrigation.

It is proposed to fence a 40 acre (16.5 hectare) plot near Taif. About 2½ acres (1 hectare) should be devoted to field trials of the most drought resistant grasses and shrubs without irrigation. The balance of the plot will be protected but the native vegetation will be allowed to remain as a demonstration of recovery and forage production. This plot may be conservatively grazed when recovery is complete.

A suitable site was selected adjacent to the south side of the Taif Airport. It is recommended that this site be approved and title to the lands be assured by the Saudi Arabian Ministry of Agriculture. The plot should be fenced as soon as fencing materials arrive. The most appropriate times for seeding of introduced species is believed to be prior to May 15 or during late August.

Just as soon as these two plots are sufficiently developed so that the most suitable species may be selected, it is recommended that a field planting of 200 to 300 acres be undertaken. A suitable site exists on the Wadi Garrowa Saliha, just outside of Taif. No soil preparation will be necessary. Grazing control will be necessary.

Forestry

Extensive stands of ar-ar (*Juniperus* sp.) were seen in the Hemma N'Moor. Very few trees occur on similar mountain lands outside the hemma. This is a scrubby juniper with numerous stems. Some cutting was observed just inside the hemma boundary. Controls should be adopted so that one stem is left uncut to grow into a larger tree. The use of athil (*Tamarix* sp.) was observed at several places, notably Turaba and Bisha. Athil has been used to some extent to stabilize sand dunes. Wide use could effectively be made of athil plantings to stabilize the large dunes west of Ranya. Athil is also much used for small building timbers. At Bisha very old athil trees are repeatedly lopped for this purpose. It can also be much more widely used for windbreaks around farms. Cuttings can be readily rooted although watering is necessary for one year.

On the upper Wadi Waj about 12 miles from Taif a very large Eucalyptus tree was observed. It is confidently believed that Eucalyptus can be readily established in many of the wadis at Taif, at Turaba, and perhaps in carefully selected areas at Bisha. Eucalyptus will make a good shelterbelt to protect farms against sand. It will also add greatly to the supply of building timber and fuel wood. Agriculturist Badr has successfully grown Eucalyptus. I saw some of his fine trees on the military hospital grounds at Taif. It is recommended that USAOM obtain Eucalyptus seed; the Saudi Arabian Ministry of Agriculture to make available funds for a small nursery at Taif. Mr. Badr could undertake the growing of nursery stock, its distribution and he could also supervise field planting and initial care of trees. I have available a small quantity of seed of *Eucalyptus gomphocephala* which I can make available just as soon as proper provisions can be made to carry this project to success.

General

I wish to express my sincere thanks and appreciation to His Highness, Prince Sultan, Minister of Agriculture; to Shaikh Siragh and Agriculturist Abdul Aziz Badr, and to Their Excellencies, the Emirs of Taif, Turaba, Kurmah, Ranya, and Bisha. Their hospitality and helpfulness made this trip instructive and enjoyable. I shall be glad to furnish more detailed information on any phase of this study, if desired.

HESchwan/pa

HC

Feb. 30, 1954. Ag 17

To: W. J. Edens.

From: Fred A. Barham.

WJC

Subject: Monthly Report (Feb)

The first seven days of Feb. was spent with Mr George Hibbs, soil specialist, in the Dammam and areas.

We found the agricultural conditions there very bad. The water table in most places was found to be very high. Sometimes less than one foot.

Due to the high water table many of the palms have very little root system. In fact we found many of them fallen over on account of no anchor roots.

All the palm gardens have the trees much too close together then they are interplanted with other trees and crops.

It would be very expensive to develop new land in this area due to drainage. If the water table could be lowered then there would be danger of salt water from the Gulf coming to the surface.

The next two weeks were spent in the Hofuf vicinity. Not much I could do on account of water and mud. Most all the roads to the gardens were impassable.

On Feb. 21st I went to Dhahran for supplies, and to secure some tires for the station wagon from the Aramco Oil Co. After getting the tires from Aramco I found four other tires at

the Consulate so now I am well supplied with tires.

I also received a shipment of garden seed from the States while in Dhahran.

Upon returning to Hofuf Mr Hussini and I started to looking for good farmers that would be willing to try out these different varieties and kinds of seed. Up to date we have put out seed to some which I believe will take good care of the plantings and keep records of the results. Of course I will have to make many trips back to these farms in order to check on the plantings.

I am also now getting some land ready here at the Agr. Station for order that I can try out the different seeds and different methods of irrigating.

To date I have two pieces of land about ready to plant. One $36' \times 100'$ and the other $50' \times 100'$. With nothing to work with but a hoe shovel and garden rake I think this will be about as much as I can handle.

I have given this land a fair application of good well rotted goat & sheep manure. I will also apply some chemical fertilizers if I am able to find it.

I am also having to clean out and repair about five hundred feet of ditch. The work seems to be progressing very slow even for Arabia. I think a good counter fort would speed it up some.

As soon as the fidda office has completed a program for this area I would like to have Mrs Parker, the livestock specialist, to spend a couple of weeks with me in order to see what we can expect to do in the way of livestock improvement.

One thing for certain we can, without too much expense, raise all the feed we need here on the agr. station farms.

Mrs Edens, I think it would be well if you could spend a few days here with me. Especially the first few days that Parker will be here.

Frederick A. Barkham
Agri. Extensions Specialist
Hofuf, Saudi Arabia.

agp
Cannon

①

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

February 23, 1954

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: G. P. Gibbs, Soils Specialist

SUBJECT: Monthly Report for February, 1954

HC
G.P.G.

Three reports were submitted on field activities for this month which covered field observations. I found Aramco officials very cooperative in sharing information they have collected regarding farming practices and water and irrigation records.

February 14th the return trip was made to Jidda. Flying low over the desert east of the Divide provided an excellent opportunity to see the results of the recent rains. Vegetation is showing considerable growth where the desert was gray two months ago. Water was standing where it did not exist two months ago.

In my reports covering field studies on the east side of the country, the subject of rodents was not discussed, though I believe it should be given considerable attention. Rodents are competing with human beings on both the east and west sides of Arabia. They eat seeds when they are planted, eat dates and grain in storage, and rats cut stems of dates letting them fall to the ground where they eat them. There is always the danger of European rats being the cause of plagues.

In Arabia the people I have contacted in the field have shown an interest in soils and water management or seed or fertilizer improvements when I have discussed these subjects with them. They do not recognize the lack of improved farming methods as problems, but they do recognize rodents as a real problem. I believe we should make a special effort to control rodents. I am sure we will get more cooperation from the people on such a program than can be expected from any program involving a problem not recognized by the people.

The importance of an educational program was emphasized to us in one small village in the Hofuf Oasis. Donkeys, people and clothes were all washed in the spring from which the drinking water came. One young man was employed by Aramco and was at home on vacation while we were in the village. He told us he was trying to explain to his people that such water was not fit to drink judging from his experience and observations while working with the Americans and others at Dhahran.

A one-day trip was made to Khulais to approve the soils of the selected site for a demonstration farm.

GPGibbs:o



UNITED STATES OF AMERICA
~~TECHNICAL COOPERATION ADMINISTRATION~~
USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

MEMORANDUM

February 28, 1954

TO : Harland J. Corson
Director

FROM: W. J. Edens
Chief, Agriculture Division *WJE*

RE : Monthly Activity Report - February, 1954

CRITIQUE:

Agriculture Division activities continued at an increased pace during most of the month, but slowed down during the latter ten days. The new Ministry of Agriculture is now concerned with its proposed budget. A five-year plan for agriculture has been constructed and presented to the Minister, as well as a budget for the first year.

Verbal approval of the work plan for Khulais has been given by the Minister. Work will get underway when written approval has been given. The 1954 projects have been discussed and differences composed.

Preliminary studies of Hofuf, Qatif and Dammam have been made and two range management experimental plots have been selected.

OPERATION SUMMARY:

During the first part of this month, much time of the staff was given to assisting the new Ministry of Agriculture in planning and budgeting. At the request of the Minister, a five-year plan for agriculture was constructed for the major divisions of the Ministry. A narrative report was written to accompany this plan and a program budget for the first year was submitted. The Minister will submit his budget next month. The plan and budget include many items the Agriculture Division (USAOM) proposed in its 1955 budget request.

The Khulais work plan has not, as yet, been approved by the Minister. This is somewhat difficult to understand since funds are available for this project.

For the past several weeks the Regional Deputy Director of FAO has been serving as head of the FAO Mission to Saudi Arabia. This gentleman is a former Minister of Agriculture for Egypt and it is rather apparent that he is advising the Saudis concerning the feasibility of our proposed work at Khulais. I understand that he has advised against

✓ a plot of crown land selected at Khulais for testing seeds, though our soils scientist and agronomist have approved the suitability of the land and a 300 gallon exploratory water well is located in its midst. It is my opinion that the Rome FAO office would not approve this gentleman lending himself to this situation, though his intentions may be the best. And it might be pointed out that Egypt also has a Point IV program.

II a ✓ Mr. Gibbs, in cooperation with Mr. Barham, has made a brief soils study of the Hofuf, Qatif and Dammam areas. This study points out the need for (1) irrigation water management, (2) addition of organic matter, (3) stabilization of water flow, (4) separation of crops with different moisture requirements, (5) drainage, and (6) crop rotation. In Qatif some farmers are applying 23 acre feet of water per year. The study also showed the need for sand dune stabilization and wind breaks.

A ✓ Messrs. Parker, Rountree and Gibbs have been engaged in the selection of a plot of land on which to establish a modest crop experiment farm. In addition, plans have been made for distributing baby chicks if the purchase of chicks and feed can be arranged.

II a ✓ Mr. Schwan and his counterpart made an interior trip to locate a suitable area for selecting a 40-acre plot of land for experimental work in range management. The present '54 plan is to have plots in the Khulais, Taif and Riyadh areas.

IV ✓ The date study report by Mr. Nixon has been typed and is ready for critical evaluation. A brief summary of findings may be included in next month's report.

V II ✓ The Mission was visited by Mr. Robert B. Thraillkill, Assistant Director of the Regional Locust Control Program for FOA. He was assisted in visiting with DLC, FAO, and the Minister of Agriculture. A sample agreement for cooperative locust control work has been submitted to the Minister of Agriculture.

II ✓ Projects 1, 2 and 3 for 1954 have been discussed with the Ministry and agreement has been reached on all essential points. However, I doubt that these agreement will be signed by the Minister before his budget is approved by the Kingdom Council of Ministers next month. There have been numerous conferences with the Minister and his staff this month. It is believed that much progress is being made and that concrete results will appear when the Ministry learns what its budget will amount to for the next fiscal year.

PROBLEMS:

II a 1. It appears that 1954 project agreements will not be signed by the Minister of Agriculture until he gets approval of the Ministry budget in March.

II a 2. Getting the Khulais work plan approved. The new Minister does not appear to be interested much in the Community Development Project Agreement.

II a 3. Appropriate and qualified counterparts.

II a 4. Supplies, equipment and materials cannot be ordered until the 1954 project agreements are signed. The hour is getting late.

VII a 5. Too much time is required by the Saudi garage to service field vehicles.

ibid 6. Field housing for technicians.

ag Rpts
UNITED STATES DEPARTMENT OF AGRICULTURE

FOREIGN AGRICULTURAL SERVICE

WASHINGTON 25, D. C.

FEB 16 1954

AIR MAIL

Dr. W. J. Edens
c/o American Embassy
Jidda, Saudi Arabia

Dear Dr. Edens:

The copies of summary reports for December by you, Mr. Parker and Mr. Stewart were most interesting and helpful in keeping us informed concerning the developments in the work in Saudi Arabia. These reports have also been passed on to Dr. Aamodt, Dr. Marston and Mr. Hearne for their information and guidance.

Sincerely yours,

H. G. Bolster, Chief,
Middle East Section

cc: Harland J. Corson, Jidda

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

January 31, 1954

MEMORANDUM

TO: Harland J. Corson, Director
USA Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - January 1954

The Agriculture Division activities were stepped up considerably during January. A Ministry of Agriculture was created and a Minister appointed. The new Ministry has been assisted in planning its organization and the personnel that should be provided. Also assistance has been given in construction of its budget.

All 1954 project agreements have been written and translated, soil studies have been continued, and progress has been made in the areas of animal husbandry, agricultural extension, range management and work plans for community development in Wadi Khulais.

Mr. B. H. Rountree, Agronomist, and family arrived during the month.

Operation Summary

January has been an unusual month of progress when contrasted with many months of the past. Our agronomist, B. H. Rountree, who has been needed since the Mission began, arrived and is hard at work. Morale of the Agriculture Staff is high with the opportunity in sight of being able to start wheels turning in the direction of concrete accomplishments.

Early in January the Department of Agriculture, which was located in the Ministry of Finance, was officially elevated to a Ministry of Agriculture. The King's brother, HRH Prince Sultan Bin Abdul-Aziz, was appointed Minister. Five meetings have been held with the Minister. At his request, the writer has submitted a complete organization chart for the new Ministry, which appears to be appropriate for the present and the next several years. It was also requested that personnel appropriate for all positions of much consequence be submitted, giving minimum training and experience for each. This has been done.

Upon further request by the Minister, assistance has been rendered in the construction of the next fiscal budget. In fact, a complete budget

framework was presented with many projects written in which appear to be appropriate for the immediate future and from a long-time standpoint. Copies of the Organization Chart and suggested personnel are herewith attached. The budget, as yet, has not been completed.

The Minister has requested that a Five-Year Plan for Agriculture in Saudi Arabia be constructed.

All 1954 project agreements have been written and translated. The draft agreement for Project No. 1 has been submitted to the Ministry for review, discussion, and agreement.

Early in the month Mr. Gibbs completed the soil survey in Wadi Khulais, and he is now making a general reconnaissance survey of the Hofuf and Qatif Oases on the Persian Gulf side. Mr. Parker and his counterpart have completed plans for construction of the Livestock Improvement Farm. In addition, an experimental pit silo has been constructed on one of the Shaikh's farms at Khulais. The village Emir has become interested and wants to build one. If this is successful, it could be the beginning of a great increase in livestock production in the wadi area.

Mr. Schwan and his counterpart have initiated range vegetation plantings at Kilo 10 and in Wadi Khulais. Some 25 to 30 species of exotic forage plants will be tested and compared. Plans have been completed to begin the selection of 10-acre experimental plots in three important ^{ESR 2146} program areas.

Preliminary studies have been made in Wadi Khulais by Mr. Stewart, and in the Hofuf Oasis by Mr. Barham. Preparation has been made to provide equipment for cleaning out a few dug wells at Khulais. Natives claim that sand and other debris prevent the wells furnishing much more abundant water. When an agreement has been reached with the Ministry concerning a program of work at Khulais, activities will pick up greatly.

Problems

1. 1954 Project agreements may not be signed by the Minister of Agriculture until he gets approval of the Ministry budget in March.
2. The Director General of the former Department of Agriculture may play an important role in the new Ministry. It will be necessary for him to reverse his actions of the past if he is not to be a stumbling block.
3. Another technician has been lost from the staff and it will require months for the Washington office to make a replacement.
4. Too much valuable time is lost due to the slow servicing of vehicles and the procurement of miscellaneous items necessary for field operations.
5. Insufficient secretarial assistance.
6. Field housing for technicians.

2

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USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

MEMORANDUM

January 30, 1954

TO : Robert D. Dolley, Chief
Education Division

FROM: August R. Anderson
Vocational Education Specialist

RE : Monthly Report - January 1954.

I arrived at my post of duty, Jidda, Saudi Arabia, on December 27, 1953. Most of the first week in Jidda was spent in orientation.

Following your suggestion, I have spent much of my time at the Jidda Industrial School with the purpose in view of assisting them in every possible way. After studying the situation at the school, I made suggestions to Mr. Jamjoom, the Director, as to the possible rearranging of equipment in order to utilize floor space more efficiently. As a result, some change has been made and more is indicated in the near future. Plans are being made at the present for the up-grading of shop instructors. Future planning for a new school building has received my attention and a tentative sketch of a floor plan has been completed. The acquiring of materials and the plans for converting a truck into a mobile visual aids department has been attended to and work will be started on it in the next day or two.

ARA/pa

USA OPERATIONS MISSION TO SAUDI ARABIA
American Embassy - Jidda

January 29, 1954

MEMORANDUM

TO: Dr. Wm. J. Edens, Chief, Agriculture Division

FROM: T. O. Parker, Livestock Specialist

SUBJECT: Monthly Progress Report -- January 1954

During the month of January I made a new set of plans for the livestock improvement station, to replace those which were taken by Mr. Abass, draftsman for the Saudi Arabian Department of Agriculture. Along with you, we showed these plans to the Director General of Agriculture.

Accompanied our soils specialist, Mr. George Gibbs, to Hadda esh Sham to look over the Government farm and determine its possibilities for growing feed for the proposed livestock station. Mr. Gibbs is of the opinion that this area will be suitable and it appears that we can expect to use 20-25 acres.

On January 9 I went to Khulais with Mr. Stewart and his counterpart, accompanied by Mr. El Bakrey, to look for a site to build a demonstrational trench silo. I selected the site and made an agreement with the owner. We are to subsidize the project 100 Riyals to aid in digging and filling the silo and also furnish cement for plastering walls. We returned on January 11 and haven't been able to locate Mr. El Bakrey since. He was first reported to be ill at his home in Mecca and later he was reported on leave.

Supplies for building a silo were secured and we returned to Khulais on January 19 and started digging. The owner was reluctant to build the silo at first but upon our return he wanted to build one four times as large as we had originally suggested; then finally agreed to build one of 14 tons capacity because it will be all he can fill.

We started laying rocks on January 23 and completed the silo on January 25. We arranged a meeting for farmers to come in and see the silo on January 27 and had 51 farmers present. We appreciated the fact that you and Mr. Corson were able to attend the meeting.

We have another silo planned for the Emir at Khulais.

It is now time to place our order for baby chicks. We plan on ordering 6000 baby chicks for distribution at Wadi Fatima, Wadi Khulais, and Hofuf. Equal numbers of New Hampshires and White Leghorns are recommended.

We wrote Mr. Hubert Lasater, Lebanon, and Mr. C. S. Stephanides, Iran, on December 30 asking if they were in a position to supply these chicks the latter part of March or the first week in April. I have received no answer and assume they are not able to supply the order. It is my recommendation that we place an order in the States immediately and suggest we come to some conclusion on my memorandum of January 5 regarding the feed.

The work we are doing with silos will aid in the conservation of feed in the Wadi but our overall livestock program is dependent entirely upon the livestock demonstration farm project being signed and work started. It is much easier to show these people than to tell them and at the same time be producing better sires for distribution to the farmers. The baby chick program and the silo program are only a stopgap to the overall needs. It is my opinion that we should have an agreement setting forth what each Government is going to do on all livestock projects, rather than a hit and miss program with the Saudis furnishing nothing. They have contributed nothing to the silo program, nothing to the baby chick project, not even a counterpart. It is my opinion that I have made a mistake in offering 100 riyals for the construction of the first silo because I think no more will be built unless we pay 100 riyals. If we continue to furnish everything, the Saudis will expect us to do the same on all projects, large and small.

TOParker:o

Rpt

USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

January 14, 1954

Dear Mr. Bolster:

I am so far behind with my correspondence, an apology is due to all.

Your letters of December 10, 17, 21, 22 and 24 with enclosures, pertaining to livestock and poultry feed problems, seeds, and personnel, are appreciated very much. Each technician has read these letters pertaining to his respective field. Your and Mr. Moncure's thoughtfulness and spirit of helpfulness have been very encouraging. When we get more assistance here, I shall be more prompt in replying to all communications.

Enclosed you will find some reports and a Royal Decree. You may have received these through the Director's office, but I doubt it since office machinery is still at a minimum. Men of the Agriculture Division pecked out their own reports. The Brief Agriculture Division Activity Report for 1953 was written primarily for the new Minister of Agriculture, although it was directed to Mr. Corson. I'll explain that some day when more time is available.

The December 23, 1953 report on observations and situations in the Khulais Community paints a vivid picture. I requested that Mr. Stewart obtain such information as a basis for further planning at Khulais. Stewart typed it himself, so please overlook errors. It is well that some of the boys can type.

Some interesting things are beginning to take place. I shall write to you regarding these within the near future.

Sincerely yours,

W. J. Edens
Chief, Agriculture Division

Enclosures -
As above

Mr. H. G. Bolster
Head, Middle East Division, FAS
U.S. Department of Agriculture
Washington 25, D. C.

US OPERATIONS MISSION TO SAUDI ARABIA
Jidda

MEMORANDUM

January 2, 1954

TO: Mr. Harland J. Corson, Director
US Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - December 1953

CRITIQUE

A considerable number of activities have taken place in December, though the program as a whole is moving rather slowly. Contact was made December 27 with the Director of the Department of Agriculture for the first time since last April. Work with his subordinates has not been very fruitful.

1954 fund allotments were made available by the Washington office practically at mid-year. The next two months will be the last of the Saudi Arabia Government's fiscal year and it is understood that funds are very short. We should now, and not ten months later, be writing and signing 1955 projects on the basis of their annual allotment of funds.

A local newspaper announcement states that a Minister of Agriculture has been appointed, which means that the Department of Agriculture has been elevated to a Ministry. It is rumored that the new Minister will not take office until the beginning of the fiscal year. This is already causing delay of decisions when they need to be coming immediately.

A soils survey of the Khulais Community has been completed and extension work is getting under way. Further well drilling has been delayed due to the Government terminating its contract with Michael Baker Company. Soil surveys have been made also at the Horticultural Experiment Station and at the Kilo 40 farm where dates are being planted.

A preliminary study of the Hofuf Community is being made for the purpose of initiating agricultural extension work. And efforts to consummate the Livestock Improvement Farm project agreement continues. This is delaying the shipment of livestock from the U.S., which should be in process now during the winter months. Other 1954 project agreements are being delayed because of present political changes and indifference on the part of the Director of Agriculture.

A trip was made to Iraq and Iran by Mr. Parker to study livestock conditions and programs there, and to locate desirable breeding stock.

The date study by Mr. Nixon was completed and the report is now under review in preparation for publication.

OPERATION SUMMARY

A. Progress

Items of progress for the month of December are herewith listed:

1. A trip to Iraq and Iran was made by Mr. Otis Parker, livestock specialist, to observe programs of livestock improvement and to locate desirable breeds of sheep for foundation purposes. The trip was disappointing from the latter standpoint.

2. Mr. George Gibbs, soils scientist, has mapped farm lands in the Khulais Community and determined their irrigation qualities and, to a certain extent, soil-crop adaptability. Only about one-fifth of the land now in farms is being farmed, most of the wells need cleaning out, work oxen are very scarce, and the people as a whole are very poor.

Most land is of good quality and awaits larger water supply, improved irrigation practices, better seeds, and a better cropping system.

3. Preliminary extension work was started in the Khulais Community under the direction of C. Verne Stewart, Extension Specialist, and his Saudi counterpart, Mr. Masud T. Foruki. Work thus far has been observation and study of present situations, and meeting the Amirs and farmers of the Community. This has revealed many abandoned farms, sand and trash filled wells, scarce supply of seeds, inadequate cropping systems, considerable insect infestation, low soil fertility, wind damage to crops, livestock lacking in numbers and quality, and the need for health and education facilities.

4. The date variety study conducted by Mr. Roy W. Nixon, Date Specialist, was completed. The most important varieties were five in number with about a dozen of secondary importance. This study should be of great value to date growers in guiding their planting programs. The report is under review and will be published at an early date.

5. Extension work is being initiated in the Hofuf Community under the direction of Mr. Fred A. Barham and his Saudi counterpart, Ibrahim Hussein.

6. Aerial photography of the Khulais Community farming area has been completed and maps are now in the process of completion. This photography will be of much assistance in community farm planning, and of value in solving irrigation problems.

7. Soil surveys at the Horticulture Experiment Station and at Kilo 40 farm were made by Messrs. Gibbs and Parker in attempting to locate a site for the Livestock Improvement Farm.

8. Plans and estimates have been completed by Mr. Parker and his counterpart, Mr. El Bakky, in preparation for consummating the Livestock Improvement Farm project agreement. Much time has also been given to locating sources of satisfactory feeds.

9. Mr. Herbert Schwan, Desert Range Conservationist, has been studying vegetation response to the November rains. Also plans have been made for planting grass seeds at Khulais and at Kilo 10. A collection of seeds was received from Dr. Hyland of the U.S.D.A. which will be used at Khulais, Kilo 10, and other selected localities. Mr. Schwan has been handicapped because of the lack of a counterpart. This has prevented visits to grazing areas and the selection of demonstration areas to be fenced.

PROGRAM DEVELOPMENT

The Agriculture Division faces a serious situation due to the disorganized condition of the Saudi Department of Agriculture.

The present Director General of Agriculture failed to get his department budget approved to his satisfaction last March. In April he departed for Egypt where he stayed for about five or six months. Upon his return to Jidda he has been engaged in establishing a printing plant and has not made himself available at the Department of Agriculture Office. The Assistant Director of Agriculture has been on a trip for about two months and has not returned. The Head of the Horticulture Division has been acting. However, he has made himself very scarce, possibly not wanting to make any decisions due to the present political situation.

A Ministry of Agriculture has been announced and one of the Princes has been appointed Minister of Agriculture. It is not known when he will assume office.

As yet, Mr. Schwan has not been provided with a Saudi counterpart. This is seriously retarding his program of work. Many promises have been made by the Department of Agriculture, but no counterpart is in sight.

Vehicles (Jeep Station Wagons) for agricultural technicians ordered in February 1953, arrived some two months ago, but Customs still holds them because a contraband was placed on Jeeps after the Jeeps were shipped.

The secretarial situation is disgusting and maddening. The Chief Agriculturist has been in this country for more than a year without the assistance of a secretary. Only typing is available in a very limited quantity. Everything typed must be written in long hand first. Many replies to letters and other matters, perforce, must go unattended which is embarrassing to persons who, in the past, have attempted to conduct business at least on a minimum respectable level.

Ag Rpts
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USA OPERATIONS MISSION TO SAUDI ARABIA
Jidda

January 1, 1954

MEMORANDUM

TO: Mr. Harland J. Corson, Director
USA Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: A Brief Agriculture Division Activity Report for 1953

The year 1953 has been an exploratory period for USAOM agricultural technicians. Much has been learned. Saudi Arabia is a large country with many people engaged in farming and livestock grazing. Rainfall is very limited and consequently water is very scarce. Much land is barren and farming areas are not continuous, but are scattered throughout the country. These factors pose a tremendous problem to all who are concerned with agriculture. Any approach to the solution of this problem taxes the ingenuity of all and especially those who have come to Saudi Arabia for the first time.

Personnel

During the year the following technicians have been brought to the field:

Mr. T. O. Parker, Animal Husbandry Specialist - July
Mr. Roy W. Nixon, Date Specialist - July
Mr. H. E. Schwan, Desert Range Conservationist - August
Mr. C. Verne Stewart, Agricultural Extension Specialist - September
Mr. George P. Gibbs, Soils Scientist - November
Mr. Fred A. Barham, Agricultural Extension Specialist - November

All of these men have arrived during the past few months, and trips have been made into various farming areas to observe and study farm conditions and farm practices. They are now engaged in active work, or in the preparation of project activities. Mr. Nixon has completed the Al Hasa date study and returned to the States. His report is in the process of review for publication. It should be of much value to farmers and extension workers as a guide to further planting of dates.

The objective of this project is to establish a more profitable livestock and poultry breeding program by improving native breeds, introducing

Water Exploration

In the earlier part of the year, the Natural Resources Division engaged in the exploratory drilling of water wells for irrigation purposes in the Itwad Wadi area. The first wells were not satisfactory, but recently other wells have been drilled that are quite promising. Wells have been drilled also in the Khulais community. Most of these are fair producers, but are at considerable distance from farms now operated. Further drilling will depend on the advice of an irrigation engineer when he comes to Saudi Arabia.

Soil Studies

Mr. George Gibbs, Soil Scientist, has made brief soil surveys at the Horticulture Farm at Kilo 10, the Kilo 40 farm and at Khulais. Soils at Kilo 10 are very deficient in many plant food elements. At Kilo 40, the soil is unsuited for an experimental station. About 2000 acres of soils good for irrigation farming have been mapped in the Wadi Khulais area. At present, only a small percentage of this land is being cultivated. However, all of it is good for agricultural production.

Extension Work

A limited amount of extension work has been started at Khulais and Hofuf. A full program of work is to be undertaken when project agreements have been assigned and materials and equipment assembled.

Technical Counterparts

The SAG Department of Agriculture has furnished counterparts for USAOM technicians except for Mr. Schwan, Desert Range Conservationist. Promises have been made to furnish a counterpart for Mr. Schwan, but none has shown up. It will be impossible for Mr. Schwan to carry on a program without this assistance. Also, more care should be exercised by the Department of Agriculture in employing counterpart technicians.

Projects for 1953-54

Due to reorganization difficulties in the Washington office, project planning was greatly delayed for this fiscal year. However, the following proposed project agreements have been prepared and have been ready for discussion at the convenience of the Department of Agriculture.

Project No. 1 - Livestock Improvement and Management

It is proposed that this project be started by establishing a Livestock Improvement Farm at Kilo 10 on the Mecca Road. The SAG is to provide the physical plant and maintenance, and the U.S. Government proposes to provide the purebred foundation and experimental livestock.

The objective of this project is to establish a more profitable livestock and poultry breeding program by improving native breeds, introducing

desirable breeds, producing foundation herds and flocks, and distributing purebred sires to various communities. This program will encompass careful selection of native animals of Saudi Arabia and any that might be imported, improved breeding practices, better methods of feeding, insect and disease control, economical ways of housing, approved methods of care and management, and the establishment of a livestock improvement farm where experimental work can be conducted.

Project No. 2 - Range Management

The objective of this project is to improve and increase the production of grasses, shrubs and other vegetation adapted to range conditions whereby livestock production can be made more profitable to herdsmen and farmers.

Project No. 3 - Agricultural Improvement at Hofuf (or Qatif)

The primary objective of this Cooperative Service Project is to improve farm living standards through the use of improved farm practices in the Hofuf or Qatif community. Secondary objectives are listed as follows:

1. Encourage farmers to plant seed of improved varieties of crops suited to the area and use modern cultural practices so that greater production per acre will be realized.
2. Establish a plot of land to be used by technicians for crop experimental work and demonstrations.
3. Establish a livestock improvement program by encouraging farmers to follow improved breeding, feeding, grazing and disease control practices.
4. Determine insect pests, plant diseases and instruct and assist farmers in their eradication or control.
5. Encourage farmers in improving the use of available land and water resources.
6. Instruct farmers in methods of organizing and operating their farms including layout, labor, use of equipment, preservation of food, and marketing.
7. Encourage and assist in the establishment of agriculture training suited to the needs of youth and adults so they will be able to carry on their own agricultural improvement work with diminishing Point 4 aid.

The Rural Community Development Project Agreement plan for Khulais has been ready for some time awaiting discussion with the Department of Agriculture. The primary objective of this cooperative project is to

improve the living conditions and productivity of the people in the Khulais community. In achieving this objective, attention will be given to a co-ordinated approach, at the community level, to problems of agriculture, health, education, water resources, transportation and communications.

Vehicles for Technicians

Vehicles were ordered for field technicians. Three arrived about two months ago but they are being held in Customs.

Looking Ahead

It is believed that much fine work can be accomplished in 1954 with all concerned cooperating. It has been announced that the Department of Agriculture has been elevated to a Ministry. This is a step in the right direction for rendering a justly deserved service to farmers of Saudi Arabia.

When the Ministry of Agriculture is organized, it is hoped that the Agriculture Division of this Mission may be permitted to be of assistance. In most countries agricultural activities are organized around research, agricultural extension service, agricultural education, regulatory and other specialized services.

It would be most appropriate if the new Ministry were to plan a rather complete organized service to the agricultural interests of Saudi Arabia, and then begin with those parts that are appropriate at this time and could be properly staffed.

WJEdens:o



UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
US OPERATIONS MISSION TO SAUDI ARABIA
Jidda

MEMORANDUM

November 28, 1953

TO: Mr. Harland J. Corson, Director
US Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - November 1953

CRITIQUE

November has witnessed considerable activity. Much time has been spent on constructing, enlarging and refining the 1955 budget, as well as making more detailed plans for the current year, which budget was approved by the FOA/W office about one week ago.

Soil surveys have been started at the Kilo 10 Experiment Station in the Khulais Community area. Plans have been made to begin extension work at Khulais when a counterpart for Mr. Stewart can be furnished by the Department of Agriculture. Additional wells have been drilled at Khulais and El Darb where fair showings have been made.

Mr. Fred A. Barham, Extension Specialist, arrived November 22. Mr. Otis Parker made a trip to Iraq and Iran to study livestock breeding programs. It is unofficially announced that a Ministry of Agriculture has been established. During the month a trip was completed to central and eastern Saudi Arabia by Messrs. Parker, Schwan and Stewart to review agricultural conditions in general.

OPERATION SUMMARY

A. Progress

Mr. Fred A. Barham, Agricultural Extension Specialist, arrived November 22 and he is now engaged in assembling materials for initiating his work at Hofuf of Al Hasa Province. Mr. Nixon's study of date varieties nears completion. His report will be submitted shortly. A recent visit was made by the Chief Agriculturist to review the entire date study.

Mr. Gibbs has begun a soils survey at the Kilo 10 Horticulture Experiment Station where he finds a high water table, and plant nutrients are not available in proportions suitable for healthy plant growth and fruit production. However, he feels that the station is a good location for

studying fertilizer response, use of green manures, compost and water management. Mr. Gibbs' initial work at Khulais leads him to believe that the community has at least 2000 acres of good arable land and that farmers are now irrigating only a very small amount of this land.

The trip by Messrs. Parker, Schwan and Stewart to Central and Eastern Saudi Arabia took them over 1840 miles of all kinds of roads and into some of the most important farming sections. Their observations are proving valuable as planning turns to activity in concrete programs of extension work, livestock improvement and range revegetation. Mr. Parker's trip to Iraq and Iran was for the purpose of studying livestock breeding and production programs under Point 4 leadership. He found that native foundation stock was not an improvement over livestock in Saudi Arabia, and that purebred sires were being imported from the United States.

Two additional wells have been drilled in the Khulais Community, somewhat near-cultivable land and two have been drilled at El Darb. Those at El Darb are reported as good producers, and of good water. Additional wells are planned.

A trip was made by the Chief Agriculturist to Al Hasa to review the date study made by Mr. Nixon. Work has gone according to plan and Mr. Nixon will return to the United States December 16. While at Dhahran and Damman an effort was made to find living quarters for technicians to be stationed in that area. Only one two-bedroom apartment could be located, which was at Damman, and the price was 15,000 Riyals per year in advance.

PROGRAM DEVELOPMENT

Developments have been slow due to the fact that the current fiscal year budget was approved only about ten days ago. As yet, the first quarterly allotment under this budget has not been received. The prospects for accomplishing much this year are becoming small. However, it is still possible to get much work started.

Continuation projects have been planned for 1955 with the addition of more projects; including the establishment of an agricultural school. Two technicians - Stewart and Schwan - have not been furnished with Saudi counterparts. This is a critical situation. I know of only one Saudi in the entire country who is possibly trained sufficiently to serve as a fair counterpart to one of our technicians. There seems to be a determined effort to not place trained personnel from other countries in counterpart or important places for training leaders.

The Khulais Community Development project agreement should be consummated this month and Mr. Verne Stewart has been assigned as Agricultural Extension Specialist to this community. An irrigation engineer is needed very badly to team with Messrs. Stewart, Gibbs, Schwan and Parker in developing

a well-rounded project agreement. The Agriculture Division does not have sufficient vehicles for the men now ready for action, though a requisition for vehicles was submitted as early as February this year.

It seems that Saudi Arabia is to have a Ministry of Agriculture. To date (since 1949 when established) the Department of Agriculture has existed within the framework of the Ministry of Finance. The present Director of the Department of Agriculture has been absent from his office for about six months, and the Assistant Director is impotent. Consequently, a change will be welcomed. An official announcement establishing the Agricultural Ministry is expected at an early date.

TECHNICAL COOPERATION ADMINISTRATION
SAUDI ARABIA

CONTRACT FOR THE EMPLOYMENT OF PERSONAL AND
PROFESSIONAL SERVICES

The Technical Cooperation Administration in accordance with the provisions of the International Development Act (22 U.S.C. 1557), and the authority vested in the United States Director of Technical Cooperation Administration in Saudi Arabia, does hereby enter into a contract with Mr. Adil Kiblawi for his services as Educational Consultant, the duties of which position are hereinafter defined and subject to all rules and regulations of the United States Director of Technical Cooperation Administration in Saudi Arabia, as these rules and regulations now exist or as they may be changed, modified or promulgated from time to time, and in accordance with the following provisions:

ARTICLE I

This contract by and between Technical Cooperation Administration in Saudi Arabia and Mr. Adil Kiblawi shall become effective as of September 1, 1953, and continue in force through May 31, 1954, subject to the discretion of the United States Director of Technical Cooperation Administration in Saudi Arabia, providing, however, that either contracting party may upon fifteen (15) days written notice terminate this contract prior to its termination date hereinabove stated.

That for the performance of the duties as herein defined and/or as may subsequently be determined, Mr. Adil Kiblawi will be paid in Saudi Arabia currency at the rate of One Thousand (1,000) Saudi Riyals per month for the life of this contract.

ARTICLE II

Mr. Adil Kiblawi shall perform such duties and responsibilities as may be assigned to him by the Chief of the Education Division during the life of this contract. Such duties may include counseling, advising and assisting trainee applicants in the preparation of their applications; translating and interpreting; teaching, both organized and unorganized groups in such subject matter in which he may be considered proficient or in the maintenance of a regular teaching schedule in the Commercial School in Jidda, Saudi Arabia; assisting in the performance of regular office duties; representing the Educational Division at official informal gatherings and in all other ways cooperating in the accomplishment of the Educational Division objectives in Saudi Arabia.

It is further understood that Mr. Adil Kiblawi will follow the standard work hours of the Technical Cooperation Administration in Saudi Arabia, except as they may otherwise be determined by the Chief of the Education Division, and that he shall accept no other employment that may, in the discretion of the Chief of the Education Division, be considered undesirable or that mitigate against the proper performance of his duties under the terms of this contract.

ARTICLE III

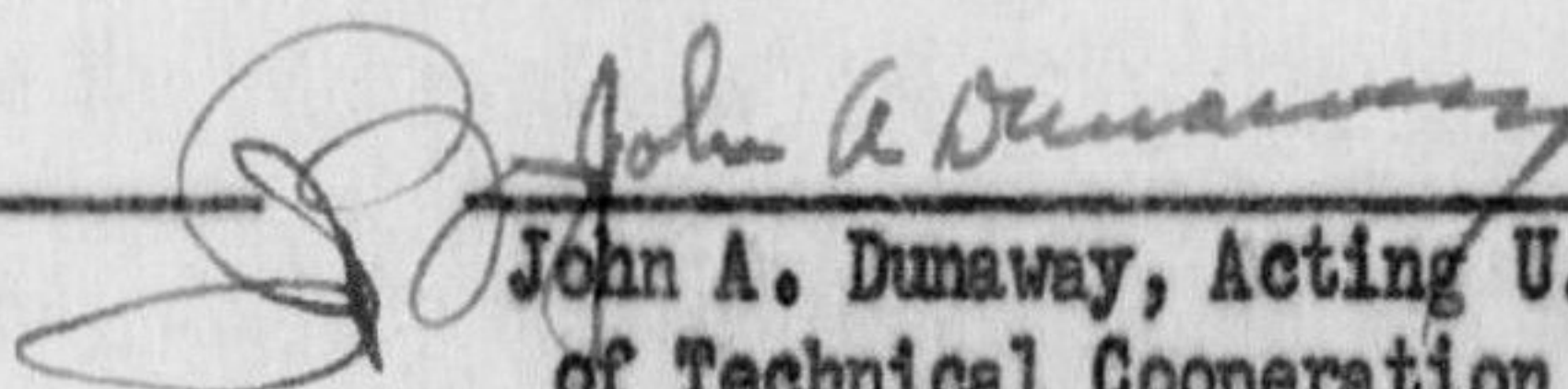
This contract may be extended, amended or supplemented at any time during the life of said contract by written agreement of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written.

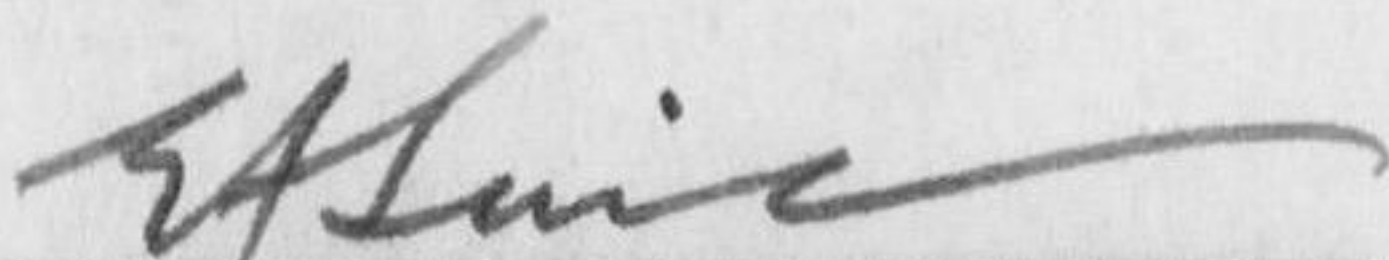
For the United States Technical Cooperation Administration Mission in Saudi Arabia:



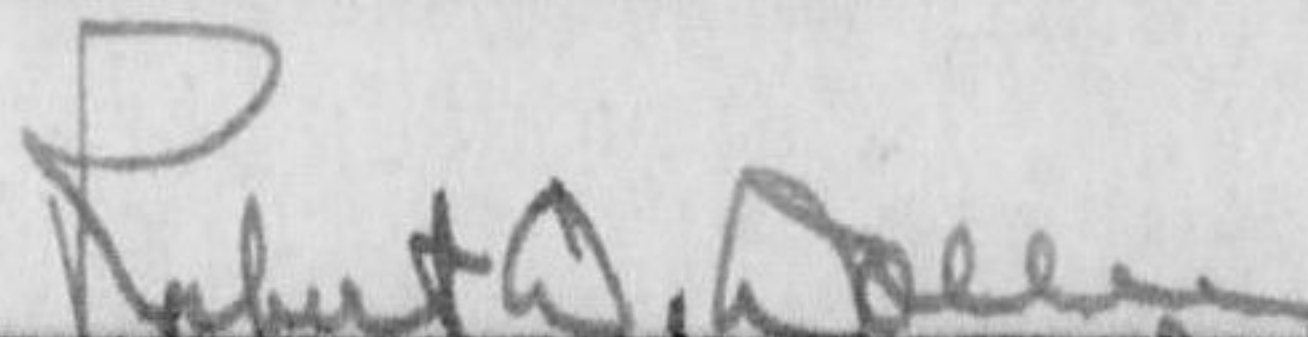
Adil Kiblawi



John A. Dunaway, Acting U.S. Director
of Technical Cooperation Administration
Mission in Saudi Arabia.



Witness to above signature.



Witness to above signature.

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U.S. Operations Mission
to Saudi Arabia
Jidda

October 26, 1953

MEMORANDUM

TO: Harland J. Corson, Director
US Operations Mission to Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - October 1953

October, being somewhat removed from the summer period, has witnessed increased activity in getting the agricultural program under way. Three technicians are now on a trip to central Saudi Arabia and the Persian Gulf area to make general observations and study of livestock, crops, range revegetation and management preparatory to writing specific project plans for work to be started shortly. The date study continues to progress and the livestock improvement farm to be established near Jidda is taking form.

Our new Country Director and Program Officer arrived on schedule, and under their leadership much has been done in planning to activate the Rural Community Development Project. The 1954 budget has not been announced by the FOA/W office, but plans have moved steadily along for constructing and submitting the 1955 budget.

Operation Summary

A. Progress

Mr. George P. Gibbs, Soils Scientist, arrived October 12th and he is now engaged in assembling materials to begin a soil survey of the Wadi Khulais area. Mr. Nixon reports satisfactory progress of the date study in the East. Harvest is about complete and more attention is being given to cultural problems. Further plans have been made for the Livestock Improvement Farm in Wadi Fatima.

Since October 10 Messrs. Parker, Schwan and Stewart have been on an observation and study tour of central Saudi Arabia and along the Persian Gulf from El Kharj to Qatif. They are expected to return by the end of the month.

The proposed annual plan of work for FY-1955 has been submitted, which includes a continuation of all 1954 projects and nine (9) new projects. These additional projects include building trench silos, market

grading and weighing of livestock, dipping vats, waterspreading, and the improvement of vegetable production.

Mr. Wm. B. Mabey, Director, Regional Locust Control Program, visited our Mission October 13 and 14. Discussions were held with officials of the Agriculture Department and Finance Ministry.

Program Development

The fact that the Mission has not received approval of its FY-1954 budget serves as a damper on developing projects. A number of conferences have been held with the Saudis and they are awaiting our time to start concrete activities.

Since the arrival of our new Country Director and Program Officer, a number of discussions have taken place concerning the activation of the Rural Community Development Project. Representatives of the Natural Resources and Agriculture Divisions accompanied the Director and Program Officer, the Director of the Department of Agriculture, and our Point IV-SAG Liaison Officer, to the Wadi Khulais area where water wells have been drilled. Mr. George P. Gibbs, Soils Scientist, plans to begin a soil survey within the next few days to determine the amount of arable land, map soils according to physical features and to determine their permeability, salt content and moisture holding capacity. He will be accompanied by a Saudi counterpart.

An outline of Planning for Community Development at Khulais, Saudi Arabia, has been constructed and submitted to the Country Director. Plans have been formulated for bringing together the SAG Department of Agriculture officials, the Emir, his advisors, and farmers of the Khulais community, and Point IV officials and technicians, for the purpose of generating a common understanding of purpose in the attempts of all concerned to improve community conditions.

WJEdens:o

U.S. Operations Mission
to Saudi Arabia
Jidda

October 25, 1953

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: George P. Gibbs, Soils Specialist

SUBJECT: Monthly Report for October 1953 -
Land Classification

October 12, I arrived at my post of duty, Jidda, Saudi Arabia.

Most of this month has been spent in orienting myself and getting acquainted as well as finding what equipment is available.

A one-day trip was made to Wadi Khulais to acquaint new personnel with the work now being carried on there and with the farming methods and systems of irrigation now being used. The most striking thing, in my estimation, was the number of people and farm animals being supported on land where vegetation was so sparse.

Through efforts of Dr. Edens, much of the equipment needed to start field work is now available and land classification can be started in the field within a few days.

GPGibbs:o

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FOREIGN OPERATIONS ADMINISTRATION
Jidda, Saudi Arabia

September 29, 1953

MEMORANDUM

TO: John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - September 1953

Critique

During the month of September the Agriculture Division was requested to resubmit its 1954 budget based on a planning fund figure announced by FOA/TS/W. This was to be accomplished without making any suggested commitments to the Saudis. Also, the 1955 budget has been submitted. Until the budget allotment for Agriculture has been announced by the Washington Office, project planning and commitments thereto will be practically at a standstill.

Technical personnel has been making reconnaissance surveys in the Jidda area relative to livestock numbers, types and breeds; feed problems, range and revegetation conditions, well drilling activities, and farming in general. Plans for establishing a livestock improvement farm in Wadi Fatima are being considered. On October 1st Messrs. Parker, Schwan and Stewart will begin a desert trip that will take them into important farming areas in Central Saudi Arabia and along the Persian Gulf. The purpose of this trip will be to observe and study range management and range revegetation problems; livestock numbers, conditions and possibilities of improvement; crops grown, irrigation and cultural practices; and customs affecting agricultural practices.

Mr. C. Verne Stewart, Extension Specialist, and family arrived September 5. Mr. Thomas J. Moon has recuperated sufficiently to return to work. However, medical advisors recommended that he not return to Saudi Arabia. Most of the entire program planning is impeded because of the lack of a Soils Specialist and an irrigation engineer.

Mr. Sadek Hussein departed for the U.S. to attend the Leader Training program in water spreading and range management.

The date study by Mr. Roy W. Nixon is progressing according to plan.

Operations Summary

A. Progress

Mr. C. Verne Stewart, Extension Specialist, and family arrived September 5th. Mr. Stewart comes to us from the Colorado Agricultural Extension Service. A Soils Specialist is scheduled to arrive in the month of October. An irrigation engineer is badly needed to help determine the best use of water now being developed in Wadi Khulais. Four wells have been drilled, the largest of which delivers about 500 gallons per minute.

The 1954 budget was resubmitted and has been forwarded to FOA/TS/W for approval. The original proposal of eight projects was reduced to five. They are as follows: (1) Livestock improvement farm, (2) Establishment of range demonstration plots in three grazing areas of Saudi Arabia, (3) Demonstration of improved land drainage in the Al Hasa Oasis, (4) Establishment of a crop experimental plot near Hofuf, and (5) Distribution of purebred sires in four communities. These proposed projects were discussed with the Acting Director of the Department of Agriculture, Mr. Ahmed Bodkook, and the Assistant Deputy Minister of Finance, His Excellency, Shaikh Abdul-Aziz Sulaiman. They agreed that the proposed projects were desirable and approved them for further discussion and as subjects of project agreements. At this meeting I discovered the Saudis had the idea that TCA was to initiate a program of its own in Saudi Arabia, which would be in addition to whatever the Government would be doing. On numerous occasions it had been explained to the Director of Agriculture and his assistants that the Agriculture Division of Point IV was here to work co-operatively with them, lending whatever technical assistance possible in carrying forward their own program of agricultural improvement. This fuzzy understanding is due primarily to the fact that the Agriculture Department has never been in a position to write a project plan in co-operation with the Saudis so that the contributions by both parties would be demonstrated.

Technicians have continued to make trips to wadis here in the West to observe and study farm conditions and operations. An extended survey trip to Central Saudi Arabia and along the Persian Gulf from El Kharj to Qatif has been in the stage of planning and preparation for the past month. The primary objectives of this trip will concern livestock conditions and problems, range management, the possibilities of range revegetation, and farm conditions and practices in general. The trip will include visits to the El Kharj farms and the Royal Farm at Dammam to observe experimental work now in process. Government officials will be contacted in several places.

A visit was made to the British Locust Control Camp north of Jidda, for the purpose of discussing present control problems. The Department of Agriculture is agreeable to Mr. Wm. B. Mabey coming to Jidda for the

purpose of discussing what Saudi Arabia can do to further cooperate in locust control. An invitation to visit Jidda has been extended to Mr. Mabey by this Division.

Well drilling for irrigation water in Wadi Khulais will continue. However, an effort will be made to locate wells out of the wadi bed near the farm land. The present wells are four to six kilometers from the nearest land now farmed. No suitable farm land is between these two points.

The date study now being made by Mr. Roy W. Nixon, USDA date specialist, is progressing according to plans.

Program Development

Little can be done at the present to further develop the proposed agricultural program until approval for the FY-1954 budget has been obtained. Mr. Parker continues to plan with the Department of Agriculture technician for the development of a livestock improvement farm near Jidda. A project plan for this work cannot be written and agreed to until the budget allotment for 1954 is known.

Mr. Sadek Hussein, TCA-SAG Liaison Officer, has been sent to the United States to participate in the 3-month's leader training course in water spreading and range management improvement on arid lands in the U.S. A trip by Messrs. Schwan, Parker, Stewart and Edens was made to lower Wadi Khulais to observe water spreading efforts by natives. Under the leadership of competent water spreading technicians this wadi might be selected as a demonstration area. Methods now followed appear to be very inefficient.

As our program develops, it is essential that something be done to reduce the loss of time and inconvenience in getting certain things done. Certain efforts of the FOA Agriculture Division are greatly hampered by the present arrangement whereby the U.S. Embassy services the FOA Mission. When food supplies and household effects of technical personnel arrive at the Jidda dock, the same sits there for weeks, or more than a month at times before the same are delivered to the owner, despite the fact that such incoming goods are not subject to import duties. There appears little interest at the Embassy relative to when the above items are cleared and delivered. When an interested effort has been made to obtain the above-mentioned items from Customs, it has been accomplished in just a few days.

Another thing - under the present set-up with the Embassy, when the Agriculture Division needs some car parts, car tools, cooking pots and pans, or some bolts, screws and nuts to make a trip into the desert which may last for several weeks, the technicians making the trip and who know - according to plan - exactly the kind and type articles needed, must have a list of the said articles submitted to a clerk at the Embassy who, in turn, has another clerk take the list to the marketplace and make the purchase. In all probability the two clerks have never experienced a trip of the type

mentioned, and we all know that when you attempt to purchase items in the Jidda Suq, it is usually necessary to make many substitutions involving many stores.

On August 4, 1953, a lug wrench, car pump, set of six assorted end wrenches, tin funnel, and a claw hammer were requisitioned. Four of the five items were delivered September 20, 1953, or a lapse of more than six weeks. The technician requesting these items could have purchased the five during a part of any one day.

A requisition was placed September 2, 1953, for a number of items required to make the trip planned to begin October 1, 1953. The last of these items that could be purchased in Jidda was not delivered until September 29, or a lapse of four weeks.

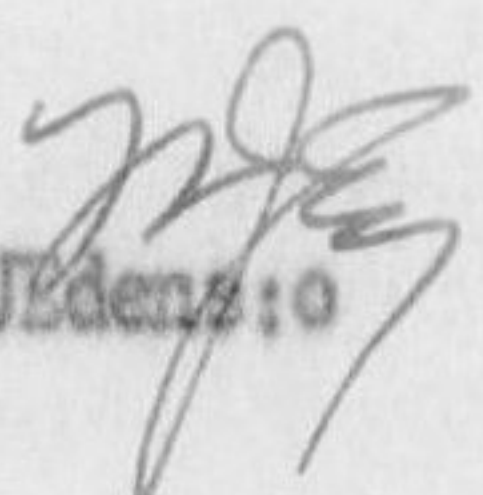
Program Information

None, except to keep the Country Director informed from time to time regarding contacts with Government personnel, and important items of discussion.

Technical Cooperation Programs other than Point 4

FAO is continuing with its survey and study in Wadi Gizan.

WJE:ens:o



Ag - 10/10
FILE - 1

Jidda, Saudi Arabia
September 26, 1953

MEMORANDUM TO: Dr. W. J. Edens, Chief, Agriculture Division, TGA

FROM: T. O. Parker, Animal Husbandry Specialist, Agriculture Division, TGA

RE: Monthly Report - September, 1953

During the month of September we have made a trip to Wadi Khulais, visited the farm of Abdullah Lahid southeast of Jidda, worked on livestock material in the office, wrote for additional material, placed livestock pictures on the walls of the office, visited the sheep market, and made an effort toward getting all material and supplies ready for the proposed trip to the farming region of central and eastern Saudi Arabia.

Abdullah Lahid is interested in irrigating and developing a small area southeast of Jidda, and we attempted to make a preliminary survey but got stuck in the sand and darkness prevented much work being done. The trip to Khulais was made, and we observed that the summer crop of Grain Sorghum had been harvested and the fall crop had been planted and was about 16 inches tall. Also noticed that more livestock had returned to the area from the Taif region. On this trip we continued down the wadi west to the Medina Road and observed the methods now employed to spread water. Prior to the time that I came to Arabia, I had secured several pictures of livestock in the States and have placed them on the walls of the office for decoration and visual aids. Have also written for additional livestock pictures and materials which will aid in the livestock program.

A study has been made of the budgetary needs for livestock work for FY-55 and complete recommendations made.

We are still in the process of making an attempt to get enough parts, equipment, and supplies to make the trip to the east side. Normal (I am told) delays and waiting have been the chief results. The requisition mentioned in my August report for small repair tools and supplies was finally partially filled on September 20th. The requisition was turned in on August 4 and filled on September 20. Motor tune-ups requested on August 4 and 20th have not been made. The Jeep has gone to the shop for this work but each time, the work has been confined to changing oil and greasing.

On September 2 I made a requisition for all necessary equipment and repair parts as well as for trucks to be checked and tuned up. Nothing was done for several days and after checking with the Administrative Officer found that nothing could be purchased until the Controller returned from his vacation. Upon his return, I went to Mr. Robinson at the Embassy, and he assured me that they would proceed with the purchase of same. Several days later, he supplied

me with a pump, funnel, lug wrench, and 4 spark-plugs (the August 4 order) and claimed that he hadn't received the order for the September 2 order. Checked with Mr. Sinclair and he ran the order down and assured me that it would be processed soon. Mr. Robinson said that he couldn't get to it until the visiting Congressmen left town because all his staff was busy taking care of them, but that he would buy the stuff for sure on August 19. He was contacted on August 20 and he had made no progress because he hadn't received the money from Mr. McCullars. Contacted Mr. McCullars, and he went with me to Mr. Robinson and told him to handle the order in the manner in which he was instructed to do the day before. Mr. Robinson said his purchaser would start on it at 9:00 am, September 23. Mr. Stewart and I asked that we might accompany the purchaser to buy the stuff since he seemed to be confused as to what a punch, socket wrench, universal joint, etc. were and were assured that it would be fine and to be there at 9:00 am, September 23. On this date we arrived at 8:00 and Mr. Robinson said that he had already gone. We went to the Suq area several times during the day but never found him. As of this date (September 24) we do not know what he bought or if he started yesterday.

These remarks are not intended to be personal toward anyone but merely to show the length of time required and the apparent lack of system in purchasing the parts necessary to safely make a trip across the desert. Part of the delay probably has been my fault for depending on what Mr. Robinson has told me. It is our present plans to leave on October 1st.

ag - 1945
FILE -

Jidda, Saudi Arabia
September 26, 1953

MEMORANDUM TO: Dr. W.J. Edens, Chief, Agriculture Division, TCA

FROM: C. Verne Stewart, Extension Specialist, Agriculture Division

RE: Monthly Report - September 1953

This technician arrived in Jidda on September 5, 12:45 am. He was accompanied by his wife and two children.

Much of the time during the month has been spent in becoming oriented and acquainted with the operations and procedure of the Mission. This has been done by the studying of reports in the Agriculture Division and in conferences with the Division Chief and other technicians in the Division.

Some of the time has been spent by the technician in doing "leg-work" in preparation for a planned trip of the central part of Saudi Arabia, such as food, parts and other necessary preliminary action and chores. This has been done in cooperation with and at the request of the Livestock Specialist Parker and Range Specialist Schwan. Plans at present are for the trip to get underway on October 1. The trip planned will take three weeks or more.

Technician accompanied Dr. Edens and Parker to the British Locust control camp on September 15. Here we visited with one of the officers who gave a brief summary of the operations of the program. Cooperation from the TCA Agriculture Division was extended to them.

On September 19 a trip was made to Wadi Khulais. The party consisted of Dr. Edens, Fuad Najjar, Parker, Schwan and this technician. The trip was devoted to observations of that area in general and with special emphasis on newly drilled water wells to be used for irrigation. Irrigation practices now being used and crops growing were also observed. Water spreading possibilities on the desert were also observed in an area between Khulais and the Medina Road. Complete details and observations plus possible projects of this trip have been drafted by the technician for future reference.

A survey of agricultural products in the Jidda market was started by this technician on September 22. The purpose of this survey is to obtain a collection of crops and other agricultural products used in Saudi Arabia. These are to be properly identified in English and Arabic to enable us to become familiar with them. Other information being obtained include their uses, where they are produced, and the price per unit. This is being done in cooperation with the Saudi Arabian Department of Agriculture. A meeting was held with the Acting Minister of Agriculture DeLaag, and he agreed to obtain samples of seeds and other products from villages and areas in the

interior

interior and relay them to us. A report on the progress of this survey to date is in process.

The possibilities of and the possible procedure for organizing extension work in Saudi Arabia have been studied and tentatively drafted by this technician. However, this tentative draft will be reviewed and revised upon return of the technician from the trip to the central part of the country. It is planned to carefully observe the agriculture and community situations existing on this trip in order to help make a more complete and definite plan of procedure in dealing with the problems in agriculture and community development and improvement.

Jidda, Saudi Arabia
September 22, 1953

MEMORANDUM TO: Dr. W. J. Edens, Chief, Agriculture Division, TCA

FROM: H.E. Schwan, Desert Range Conservationist, TCA

RE: Monthly Report: August-September 1953

I arrived in Jidda August 4. Most of August was spent in becoming oriented and settled. The arrival of household effects, food and personal belongings in September required attention and a considerable amount of time. Most of the office time was devoted to attempting to appraise and estimate requirements of a range management program, both immediate and long range. Preparations were begun for an extended field trip by motor caravan through the Kasia and to the Persian Gulf. These preparations were slowed not only by the fact that it was necessary to purchase and organize equipment, but also because no counterpart has been made available for me.

Field Trips

1. A trip on August 15 to upper Wadi Kulaise to see nearby areas and to become familiar with desert conditions.
2. A trip to upper Wadi Fatima and Wadi el Hud on August 20 to see this area and to meet the Emir of Hud as Shan.
3. A trip August 17 to Wadi Kulaise to explore the upper areas where there is a fairly good stream of permanent water.
4. A short trip with Abdullah Sahid to a nearby area on which he wanted an appraisal. This trip finished out due to our becoming stuck in the sand and being overtaken by nightfall.
5. A trip to Wadi Kulaise on September 19 to study waterspreading possibilities. On this trip we made our way from the upper wadi through the roadless lower area to the Medina Road. This trip was valuable in that we found extensive areas which are already diked to catch most of the runoff.

Conferences

1. A courtesy visit to the Ministry of Agriculture where I met Mr. Dehaag, Assistant Minister of Agriculture, as well as some of the other people in this Department.

2. On the

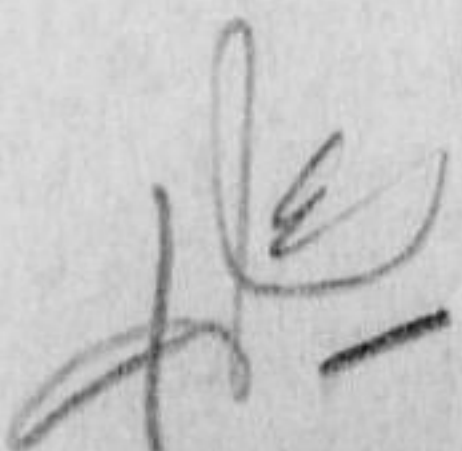
2. On the Wadi Fatima trip we stopped, visited, and became acquainted with Abdullah, son of the Emir of Had es Sham. This visit probably will be valuable if we later decide to undertake field operations in this area.

3. We called on His Excellency Abdul Aziz, Assistant Deputy Finance Minister. The principal purposes of this visit were to become acquainted, to discuss the general agricultural program, and to attempt to get action on a counterpart for me. I found the Assistant Minister was quite well informed on some of the range problems.

4. On September 14 I had a profitable visit with Mr. C.W. Baker, a seed and pasture man who told me he is employed by SAC under the Railroad Commission, and has his offices in Dhahran. Mr. Baker arrived in the country September 1 for a four-month assignment. He came to Jidda for one day to see the country from the air and was directed to contact me by H.E. Abdul Aziz. Baker has had about 18 months experience in North Africa and I was able to get much information on plant species and revegetation techniques, which he has observed under desert conditions quite similar to those which exist here.

General

This was a "breaking in" period, during which it was necessary to get the feel of the job and of some of the problems. It was possible to evaluate some of the evidence on the ground and attempt to formulate methods of approach, especially for a long-range program. The time is still too short to settle upon a thoroughly sound immediate or short-range program because many factors inherent in existing patterns of land use, traditions, and the basic culture must be taken into consideration. However, some things, such as study plots, to determine the effects of protection, and for testing the adaptability of native and introduced forage species, appear to be necessary as first steps in a program.



HESchwan:pm



UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

Agri meet
File
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September 9, 1953

MEMORANDUM TO: Mr. J. A. Dunaway
Acting U. S. Director

FROM: E. Betzig *EB*
Acting Program Officer

SUBJECT: Meeting with Assistant Deputy Minister of Finance
September 3, 1953.

On September 3, 1953, a meeting with Abdul Assiz, Assistant Deputy Minister of Finance, was held in his office and attended by Dr. Edens, Mr. Schwan, Mr. Betzig and Mr. Fuad Najar.

The matter of the employment of Mr. Farouki by the Department of Agriculture was discussed. Mr. Farouki is to act as counterpart for Mr. Schwan and Mr. Parker. The Deputy agreed to have the Department employ him and stated he would discuss the matter of salary, etc., with Farouki.

Dr. Edens said he would like to discuss the state of affairs of the Department of Agriculture with Assiz at some future date. This discussion would have to do with methods of operation and organization; concerns which presently hinder the efficient operation of the Department.

Mr. Schwan's work in Range Management and Water Spreading were discussed. Assiz said the Hasa coastal areas would appear to be promising as water is present and fair native vegetation grows there. He said the Crown Prince was interested in this matter and had so noted on his recent trip to that region.

Dr. Edens stated he would like to discuss with Assiz Agriculture Projects which TCA proposes to undertake in this fiscal year. Assiz said he was willing and eager to do so.

Agri File 1
Reports

American Embassy
Jidda, Saudi Arabia

August 10, 1953

REPORT ON TRIP TO DHAHRAN, DAMMAM, QATIF,
HOFUF AND EL KHARJ TO ORIENT MR. R. W.
NIXON, DATE SPECIALIST, IN THE AREA WHERE
HE WILL WORK DURING THE NEXT SEVERAL MONTHS

W. J. Edens - July 27, 1953

Mr. Nixon and I left Jidda by plane the morning of July 11, 1953, and arrived in Dhahran that afternoon about 2:00 o'clock. Being without transportation facilities, and the American Consulate not having been notified of our arrival, Mr. Noel, Vice Consul General, was kind enough to come for us. We visited briefly with Mr. Max Bishop, Consul General, and Mr. Noel obtained permission from ARAMCO for us to lodge at Steineke Hall. Arrangements were made to visit on the following day H.H. Amir Saud ibn Abdullah ibn Jiluwi of Al Hasa and H.E. Shaikh Abdullah ibn Adwan, Assistant Deputy Finance Minister for the Province of Al Hasa.

Later in the afternoon we visited with Mr. William Eltesti, Director of Industrial and Agricultural Relations - ARAMCO. He stated that he would be glad to cooperate in the date study wherever he could, and that the El Kharj farm was planning to send one of their Arab assistant farm managers, Abdullah Aziz, to work with Mr. Nixon and learn all he could in order to care for the 280 acres of date palms on the El Kharj farms.

That evening I went to the Air Base hospital and visited Mr. Thomas J. Moon, TCA agricultural technician, who became ill while driving Agricultural Division vehicles from Jidda to El Kharj. The Base Surgeon General, Colonel Howell, stated to me that the accident Mr. Moon experienced was very serious, and could have easily caused the loss of his life.

July 12th

H.H. Amir Saud ibn Abdullah ibn Jiluwi became ill during the previous night and was unable to see Mr. Nixon and me. Our Consul General advised that we not attempt to make further contacts or visit date gardens until the next day. Mr. Noel came by to visit with us and Mr. Moon was visited later in the day.

July 13th

Mr. Noel, Vice Consul General, accompanied us to see H.H. Amir ibn Jiluwi and Shaikh Adwan. Both are interested in getting some practical work started in Al Hasa. It was arranged for Mr. Hussaini Bodiwi to

accompany us to Qatif to survey the date situation during the remainder of the day. He came for us at 4:30 P.M. Due to the extreme heat in the summer little or nothing is done between noon and 5:00 P.M. Several date gardens were visited. None of the dates were over-ripe for study.

Earlier in the day, I talked by phone with Dr. R. H. Daggy (ARAMCO) concerning health precautions in Eastern Saudi Arabia. A commercial poultryman, Mr. Tofik Abdo, of Damman, came to see me about some of his problems. I promised to have Mr. Parker visit with him in the near future. Mr. Abdo has 700 birds and sells eggs to ARAMCO and in Damman.

Requests were made to Shaikh Adwan, when visiting with him, that transportation to and return from El Kharj, and gasoline and oil for Mr. Nixon be furnished. Adwan suggested that he have the Jeep station wagon and Power Wagon shipped by rail to Dhahran, since the trail between El Kharj and Hofuf (250 miles) was very bad driving. We readily agreed. The order was to be given immediately.

July 14th

Mr. Hussaini Bodiwi came by at 8:00 A.M. and took us to the Royal Farm of Damman to see date varieties there and then on to see more extensive areas in Qatif. Later we came back by Damman to get the railway tickets and police passes necessary to go from Dhahran to El Kharj. Later in the afternoon we attempted to get a thermos jug at the air base, but were not successful. Bought one at Al Khobar. There were only two rolls of black and white films at the air base. Mr. Nixon purchased these. Upon returning to Dhahran we visited Dr. Daggy and obtained malarial pills, water pills, insect repellents, mosquito nets, Aerosol bombs, etc. Also, during the day, I requested that Mr. Nixon be permitted to lodge and get meals at ARAMCO's camp at Muhassin, 5 kilos from Hofuf.

In the evening we visited Mr. Moon at the hospital.

July 15th

We left Dhahran by rail at 7:30 A.M. and arrived at El Kharj at 2:10 P.M. At 3:30 Mr. Joe Clark, Acting Manager of El Kharj farms, accompanied us to see their date gardens. The temperature was 115 degrees. Dates here were not as advanced as in Qatif. We learned that no order had been received from Shaikh Adwan to ship the vehicles to Dhahran.

July 16th

I requested Mr. Clark, when talking to the ARAMCO office that morning, to have them contact the American Consulate and request that they see Adwan about the vehicles shipped. This was done. Adwan promised to see that the matter was taken care of immediately. At 8:00 A.M. we were accompanied by Mr. Rex McAnalley, assistant farm manager, and Abdullah Aziz, to make a brief survey of all the dates. Late in the afternoon we visited native palm gardens.

July 17th

We were to return to Dhahran this date, but the train was delayed for one day. Mr. Nixon and Abdullah Aziz studied date trees and I accompanied Mr. Joe Clark to the south farm, about 30 miles, to see about caterpillars that were destroying the alfalfa. The temperature on this trip reached $117\frac{1}{2}$ degrees.

Mr. Clark made arrangements with an ARAMCO drilling crew that was going to Dhahran to drive our Jeep station wagon through and leave it at Steineke Hall. This appeared to be the only means of having a car for Mr. Nixon to use. Everyone advised us against trying to drive the vehicles through.

July 18th

We left by rail for Dhahran at 9:00 A.M. Arrived at Dhahran at about 4:15 P.M. Upon arrival at Steineke Hall it was learned that the Jeep station wagon had not been delivered to the desk clerk.

July 19th

Mr. George H. Patterson, drilling superintendent for the El Kharj area, was finally located, but he did not know where the Jeep station wagon had been left. He and I went to locate it but we were unsuccessful. About an hour later the car was found parked in front of Steineke Hall. In the meantime I had arranged with Adwan's office to have Mr. Nixon taken to the Qatif date gardens to obtain samples of dates.

The Jeep station wagon had three sand tires and a mud tire on it. The fourth sandtire was missing. The well driller who drove the car to Dhahran had gone to Bahrain Islands on a two-day vacation. Mr. Patterson could not locate the missing sand tire. I spent the next half day going to Khobar in an attempt to locate a tire, tube and wheel. The heat was almost unbearable, but I wanted us to leave for Hofuf the next day.

While in Khobar I was to get some plain glass to be used by Mr. Nixon in photographing, and have it cut to exact measure. I finally had to return to the shop where I was having the Jeep serviced and get a guide to locate the shop that sold glass. The glass shop did not cut glass, so I had to hunt up a carpenter shop. The glass measurement was in millimeters and the carpenter shop had no meter stick. Not remembering the exact number of inches to the meter I was forced to hunt up a meter stick. I could not locate one in two hardware stores, so I drove back to Dhahran to get a steel meter tape.

During the day I checked with Mr. Eltesti again and he had made arrangements for Mr. Nixon to stay at the Muhassin Camp near Hofuf. This proved to be very fortunate as this report shows later.

July 20th

At 8:00 o'clock I went to Mr. Eltesti's office to radio phone Joe

Clark at El Kharj about the missing tire. He stated that it was on the station wagon. Mr. Eltesti called several places and located the tire at the repair shop. A hole had been knocked in it by a rock and was not worth repairing. Eltesti said ARAMCO would sell me a tire and tube. The process began and by 1:15 P.M. I finally emerged with a new tire and tube on the station wagon. Consequently, we did not get off to Hofuf.

Mr. Clark phoned back and stated that Abdullah Aziz was going to drive the power wagon through to Dhahran. Would come along with others.

A trip was made to the airport to see about returning to Jidda on Thursday, the 23rd, and to see if I could be picked up at Hofuf. No space was available and the plane would not stop at Hofuf. I managed to get my name on the Sunday manifest.

July 22nd

We traveled by Jeep station wagon to Hofuf. Arrived at the Muhassin Camp about 2:30 P.M. Mr. Saleh Akks, government liaison for ARAMCO, had arranged for us to see H.H. Amir Abdul Muhsin Abdullah ibn Jiluwi of Hofuf at 6:30 P.M. However, when we arrived at the palace the Amir had left to go to Damman to see his ill brother off on a plane to Germany.

The Agriculture Department counterpart who was to work with Mr. Nixon had not arrived, and I had learned indirectly that the Agricultural expert, Ibrihim Hussein of Hofuf, was to serve as counterpart. He is now living at the defunct experiment station.

July 23rd

Mr. Nixon and I went to the experiment station about 7:30 to contact Mr. Hussein. We found him living there, but the SAG has not furnished the living quarters, nor has it completed the place where Mr. Nixon is to stay. It is very fortunate that he is able to stay at Camp Muhassin where the food is good and rooms are air conditioned.

We discussed date growing in Hofuf with Mr. Hussein as well as agriculture as a whole. It is quite obvious that Point 4 should station a man at Hofuf and Qatif as soon as they can be obtained and serviced. The old experiment station buildings have many possibilities when looking to the future. The suitability of the land is a big question. Soil testing and analyses should be made at an early date. Mosquitoes are numerous at this place in the evening. There are no signs of them in the daytime.

I had the opportunity to ride back in a truck to Abqaiq in the afternoon. Since no one was going Friday, and I could not find anyone who was going to Abqaiq on Saturday, I decided to come to Abqaiq and on to Dhahran.

July 24th

Wrote reports.

July 25th

A trip was made to the hospital to see Mr. Moon and to confer with Dr. Howell, Surgeon General of the Dhahran Air Base. Mr. Moon is not recovering from the accident as quickly as the doctor thinks he should. Dr. Howell stated that it may be necessary to send him back to the States.

A visa was obtained to return to Jidda. By telephone, I talked to Shaikh Adwan in Dammam concerning gas and oil supplies for Mr. Nixon at Hofuf and Dammam, the completion of living quarters for Mr. Nixon at Hofuf, and arranged a meeting with the Qatif agricultural expert. A visit was made to the ARAMCO Research Laboratory for the purpose of obtaining some date literature translations and information on rainfall in Al Hasa. After lunch Mr. Eltesti called to tell me the Dodge power wagon had broken down on the way to Dhahran, and that it would require a new radiator and two fanbelts. The vehicle was abandoned about 175 kilometers north of El Kharj near Ain Harth. Consequently, it was necessary to go to Al Khaba and look for a radiator and two fanbelts. The same were delivered to Mr. Eltesti, who promised to see that they were transported to Ain Harth at the next passing. ARAMCO has played a major contributory role in everything Point 4 has undertaken in Eastern Saudi Arabia.

July 26th

Returned to Jidda.

Agri Program

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

MEMORANDUM

June 13, 1953

TO: John A. Dunaway, Acting U.S. Director of Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Natural Resources Development basic to improving Agriculture in Saudi Arabia

Nothing is needed more in Saudi Arabia than to improve agricultural production. It is well recognized that the country must depend on the importation of large quantities of food and fiber, and the most of the people then are living on a meager subsistence level.

The shortage of water in Saudi Arabia poses a serious problem in all phases of its economy. Increasing the water supply in desert situations is usually expensive, as well as drainage work in coastal areas. Transportation and marketing are concomitant problems.

There are many locations in Saudi Arabia where basic resources development work can begin. From an agricultural viewpoint and its part in maintaining the welfare of the people, I recommend that serious consideration be given to the following:

1. Reconstructing a reservoir dam up the wadi from Abha, the capitol of the Asir. This would provide cropping the year around and greatly increase the food supply of the people as well as the livestock. It would also increase agricultural production farther down the Abha wadi. This would require an expenditure of about \$250,000 - (TCA).
2. Set up a drainage project in the Dammam-Qatif area. This is an important farm section but the crops produced are limited by a very high water table. Drainage ditches, and possibly tidal gates, should permit much increase in production. Improvement in the over-all irrigation system is needed. \$150,000 for this.
3. In the important farming area of Hofuf, drainage is a serious problem, as well as the proper use of the water available. Considerable land has become unusable because of the increased salt condition. Drainage ditches leading to the sea are needed. Other needs are the drilling of additional wells, repairing of wells, and reconstruction of

parts of the irrigation system. The estimated cost of this is \$200,000.

4. New lands are being reclaimed between Qatif and El Kharj (300 miles) by Saudis by the drilling of wells. Practically no attention is being given to leveling this new land so that modern methods of production can be employed. A land leveling team should be put into that area for the next one to two years to demonstrate appropriate ways of leveling land for agricultural production. This work should be very effective since the Saudis are now following leveling methods practiced centuries ago. - \$75,000.

WJEdens:o

Jidda, Saudi Arabia

June 9, 1953

Your Excellency:

This has reference to my letter addressed to you March 17, 1953, requesting your approval of TCA employing a date specialist, and your Order No. 5046 issued 11/7/52 giving country clearance for the aforementioned specialist.

A date specialist has been employed and he is expected to arrive in Jidda the latter part of June. The object of this technician's work will be to improve standards of date production in Saudi Arabia by:

1. Identifying the most important commercial varieties in given production areas.
2. Instructing Saudi agriculturists in the identification of such varieties.
3. Encourage farmers to plant offshoots from the identified varieties.
4. Give general instructions in improved methods of propagation and the culture of dates.

In order that the Saudi Arabian Government may profit most by work of the date specialist, it is appropriate under the provisions of the Agriculture Agreement that the host government provide one or more government counterparts to work with him. This person, or persons, should be carefully selected as to training and experience in the field of agriculture, and with the idea that he will become better qualified to provide leadership in the culture of dates.

Your cooperation with the Department of Agriculture in providing the appropriate personnel to work with our date specialist will be appreciated.

I have the honor to be, Your Excellency,

Very truly yours,

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

WJEdens:o

Copy to Shaikh Ahmed Obaid,
Director General of Agriculture

H.E. Shaikh Abdollah Sulaiman,
Minister of Finance,
Kingdom of Saudi Arabia,
Jidda.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

June 7, 1953

Mr. Abdulla Dabbag
Assistant Director
Department of Agriculture
Jidda, Saudi Arabia

Dear Mr. Dabbag:

Thank you very much for the statistics pertaining to crop production in vicinities of Saudi Arabia. This information is quite helpful to an understanding of the important production areas and the amount of crops produced.

I should be pleased to have similar information concerning livestock, or whatever statistics you have available. Such information will be quite helpful to Mr. Parker, our livestock specialist, who is expected to arrive the latter part of this month.

Best wishes to you and your associates.

Sincerely yours,

John A. Bruenay
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

William J. Edens
Chief, Agriculture Division

WJEdens:djh

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

June 7, 1953

MEMORANDUM TO: Mr. Sadek Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

RE: Request for Translation and Transmittal of
attached Letter to Mr. Abdulla Dabbag

Will you please arrange for the translation and trans-
mittal of the attached letter to Mr. Abdulla Dabbag.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

JAD

JADunaway:djh

Agui

Al Bilad Al Saudiah No. 1337 on 18 Ramadan 1372
31 May 1953

Translation

H.E. Director General of Agriculture

Your Excellency:

This is a frank message from a man who has looked into the situation of his fellow countrymen and their many problems.

H.M. The King and the Crown Prince have felt the importance of agriculture in our country in the present and for the future and therefore have founded the Department of Agriculture and put you on its head. They have entrusted to this Department the encouragement of agriculture, the securing of equipment and all the means necessary for its development. A large budget has been set aside for a strong and a wide revival.

A period of ten years has elapsed since the foundation of this Department and as we well know this is a long period of time and a wide field to establishing many projects based on sound foundations. Though, we find out that in spite of the long time and the large budget, the country did not get the benefit aimed at. The following is the proof:

In the districts of Majma'a, Sudair, and Zulfi and nearby villages there are about 400 different pumping units. In spite of the large area of these districts and the large number of units, there are not enough competent engineers to repair and maintain the damage incurred on these units and also there are no agricultural experts to direct the farmers and teach them modern agricultural methods. Therefore, you find out that the farmers have been left helpless; lives have been lost due to the neglect of the Department of Agriculture to advise on use of machinery as well as the loss of a large capital which resulted in ruining many a family. From this Your Excellency can figure the similarly sad situation of other districts as they are not better off than Majma'a.

The motive of this message we send to Your Excellency is for the general public interest hoping that it will guide you in future to procure the needs of the country and to organize this aspect on solid foundation. By doing this you would have had cleared your conscience toward God and your Government which have opened the way for you towards a sound revival and development of your Department. Long live the King and the Crown Prince who devote their interest in the welfare and development of our country in the different fields.

Ahmed bin Saleh
Majma'a

Agriculture

Conferences with

SAC Officials



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

March 26, 1953

MEMORANDUM TO: Mr. John A. Dunaway

FROM: Edward Betzig *EB*

RE: Meeting Held on March 24, With Director General
of Agriculture At The Suggestion of Dr. Edens.

The meeting, held in the Director General's office, was attended by Shaikh Obaid, Dr. Edens, Mr. Betzig and several Department of Agriculture technicians.

Dr. Edens responded to Obaid's question concerning his reaction to the budget by stating that he needed more detailed knowledge concerning organization, personnel and work plans of the Agriculture Department before he could comment on the budget. In general he thought the budget well planned and is willing to go along with it as a basis of work.

Obaid commented that the budget has not yet been approved and that he will discuss it with the Finance Minister in Riyadh the latter part of this week. The problem is to get the budget approved and then decide the locations where work should be carried on. Obaid says he greatly desires Point 4's support and offered office space in the Department of Agriculture to any Point 4 technicians requiring it.

It was suggested by Edens that the Department and Point 4 select jointly the places where work will be done with the technicians deciding on the specific needs of each location. It would be preferable, in his opinion, not to order equipment etc., until the technicians had an opportunity to study particular problems. Also that, if agreeable to Obaid, that Point 4 and the Agriculture Department would jointly carry on a number of projects. Obaid was agreeable to this suggestion. He also explained that the budget was flexible, it being possible to shift sums from one heading to another, first getting permission from the Finance Minister. He said funds will be available for demonstrational farms at Jidda, Medina and other places for seeds, buildings, etc. Machinery is a separate budget item.

Concerning the funds delineated for the Jizan Project, Obaid said they were to be used for work on the Wadi Jizan dam, a road to the damsite, water canals and the like. He said he had expected a more lengthy comment from Edens on his paper dealing with the Jizan Project. Edens replied he could not at this time comment in greater detail but stressed the need for careful planning and the fact that all development in Saudi Arabia depended on the amount of available water.

The matter of trainees in Agriculture was then discussed with Obaid describing the Saudi students in Cairo and how, following completion of their studies, they work for one year on Egyptian farms. Responding to a statement about Point 4 Trainee Grants, he asked about the possibility of sending Department of Agriculture technicians to the United States for one-year training periods. Edens told him TCA ~~was~~^{was} most interested in receiving such applications and that he was sure arrangements could be made to send these men. Obaid was interested in the possibility of the Saudi students in Egypt getting a year of training in the States after completing their studies and one year of field work. Stambouli was mentioned as a candidate being processed by Point 4 for a training grant.

The problem of developing modern irrigation practices by proper land leveling was discussed by Edens in relation to potential new farm areas in Hasa and around Riyadh-Kharj. A cooperative Project might be carried out with Point 4 aiding in the provision of certain equipment as a cat-tractor, bulldozer and scraper. Delay in the arrival of technicians is a limiting factor in the development of other projects.

Obaid returned to the subject of education by mentioning the work of a group of Saudis who had studied in Egypt. Having been educated at Government expense, they wished to do something for their country. About two years ago they organized the Saudi Establishment for Public Education, the main purpose of which is to provide primary and secondary school education at night to good students who cannot afford to study in the daytime. Classes are held in Mecca and in Jidda. In the latter city, the classes are held in the Industrial School building. The idea has been approved by SAG and gets some support from rich Saudis. It is hoped that they will soon be able to rent their own building. He said the night schools were independent of the government and were demonstrative of the desire of the Saudis to help in building a more modern Saudi Arabia.

TECHNICAL COOPERATION ADMINISTRATION

March 17, 1953

MEMORANDUM

TO: John A. Dunaway, Acting U. S. Director of Technical Cooperation
in Saudi Arabia

FROM: Edward Betzig, Program Officer

RE: Meeting with Director General of Agriculture arranged
by W. J. Edens

On March 17, the Director General of Agriculture met with Dr. Edens, Mr. Moon and Mr. Betzig in his office at the Department of Agriculture.

Dr. Edens discussed his recent trip to Hasa Province and noted the importance of date growing in that area. He stated that he hoped Shaikh Obaid would approve of his proposal to station a U. S. date expert in Hasa for a 6-month period to determine the best varieties to propagate. The expert's availability is not certain but it is believed that he is willing to come. Shaikh Obaid agreed that the proposal was a good one and that the recruitment of a Point 4 date variety specialist would complement and aid the work of Mr. Carlson, FAO packaging and marketing technician.

Mr. Moon was introduced to Shaikh Obaid and it was requested that a Saudi agriculturist be assigned temporarily to work with him. Dr. Edens explained that Point 4 had a certain quantity of seeds on hand that had been shipped when it was thought that an agronomist and horticulturist would be on hand by this time. He suggested that the Agriculture Department and Mr. Moon might try them out on some government land. Shaikh Obaid suggested that the government farm at Hadda esh Sham be used. He said that soil and water supplies are adequate. A main drawback is the lack of a good penetration road from the paved highroad. He offered the Hadda Esh Sham farm to Point 4 for use as an experimental farm. He agreed that a Saudi technician would be assigned to work with Mr. Moon.

Dr. Edens thanked Obaid for his offer but said a soils survey of the farm should be made and more knowledge of water conditions obtained before making definite plans for an experiment station.

Shaikh Obaid gave Dr. Edens a copy of the Agriculture budget and requested him to make comments and suggestions. He presented Dr. Edens with samples of the Medina dates as packaged by FAO.



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

March 3, 1953

ADDRESS OFFICIAL COMMUNICATIONS TO

Technical Cooperation
Administration

MEMORANDUM TO: Mr. John A. Dunaway
Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Edward Betzig,
Acting Program Officer

RE: Meeting with Director General of Agriculture on
March 2, 1953, arranged by the Director

The following notes concern the conference held on March 2, 1953, attended by Director General of Agriculture, Dr. Edens and Mr. Betzig.

The Director General inquired concerning Dr. Edens' forthcoming trip to Hasa. Dr. Edens replied he intended to investigate the housing situation and to have conferences with the Consul General of the U.S., Mr. Hamilton of Aramco, and Shaikh Adawan concerning the possibility of agricultural improvement work in Hasa. However, he stated work was first planned for Wadi Itwad and Hadi Sham. The Director said he was pleased to hear this for he wants to push his agricultural units.

The Director General stated that as a result of the Crown Prince's interest in Hasa there are now four (4) SAG agricultural experts there. Three were recently sent from the Hejaz. They are to instruct the farmers, carry out disease and insect control measures, etc. Dr. Edens stated that Point 4 would work with them.

Dr. Edens brought out the difficulty Point 4 is facing in recruiting for Saudi Arabia. He noted that the quickest way to improve agriculture in Saudi Arabia was to educate the younger men. A strengthened extension service is needed and Edens said Point 4 wishes to work with SAG in developing the same. The Director replied that he was planning such a service and made provisions for it in the budget. He offered to submit the budget to Edens for study and comment. The Agriculture Department must be expanded if it is to operate efficiently.

The Director questioned Edens on his paper concerning the Gizan Project. The latter replied that much could be done but the water

supply

supply must first be determined. The Director stated the Projects would wait on water and that Point 4 opinion as to the potential amount would be taken into consideration. Edens said after water was assured, the Project could be seriously discussed. He said he thought Gizan could be developed by SAG and the farmers who could hire the needed technicians. A commercial company wouldn't be necessary. He noted that the Sudan Project didn't have an extension program. In the Director's opinion, SAG couldn't carry out the Project without the help of a commercial company or some agency like Point 4.

Edens said there were a number of schemes for getting results and asked when SAG intended to start. He was informed this depended on further study by FAO. In the case of the Itwad Project, Edens noted that when sufficient water was found, that he planned to put Point 4 technicians and Saudi counterparts to work helping farmers improve the lands already worked. Then with progress being made in that direction, Point 4 would move toward bringing in new land. In the latter case, a system would have to be instituted perhaps similar to that proposed by the Director in order to get the land under cultivation.

The Director said that FAO had already made studies of check dams, etc., but that SAG feels the need for aid from an outside agency.

Edens said that Point 4 was ready to discuss plans at any time. He said he would submit a statement to the Director on his Gizan proposal as the Director requested.

The Director changed the subject to Hasa, noting the number of artesian wells in use, how water was being wasted and the water table being lowered. Edens replied that Point 4 was recruiting an irrigation engineer as the area obviously needs drainage studies and better water use methods.

Edens asked whether or not FAO plans extension work in Gizan. The Director replied that FAO was to work in only a part of the Gizan area - actually in a small valley. He mentioned the proposals of Burningham and Tothill. He claimed the latter's plan was to cost upwards of \$100,000,000. This latter plan, he said, was given to SAG in an unpublished, confidential report. Mr. de Vajda went to Gizan with the Director and abandoned Burningham's and Tothill's ideas. He proposed work costing \$2,000,000 including roads.

Edens stated Point 4 was interested not only in Gizan and Itwad but in all the agricultural areas of the country.

The Director gave Edens copies of the Ferris, Smallwood, Van der Plas and Tothill FAO reports.

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TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

MEMORANDUM

February 16, 1953

TO: Mr. John Dunaway

FROM: Edward Betzig

RE: Meeting on February 15, 1953, with Director General of Agriculture

A meeting was held on February 15 in the office of Mr. John Dunaway and was attended by the Director General of Agriculture, Dr. Edens, Mr. Hussein, Mr. Betzig.

The Director General of Agriculture had requested that TCA make suggestions for that part of the SAG Agriculture Budget dealing with Agriculture Stations.

Following an exchange of formalities, Mr. Dunaway turned the discussion over to Dr. Edens. He proceeded to list his recommendations noting that the amounts stated were for one station only and hence would have to be multiplied depending on the number organized. The number of stations would be largely dependent on the number of available U. S. technicians and their Saudi Arabian counterparts. The following items were listed.

- | | |
|--|------------------|
| 1. 10 - 12 hectares of land. | |
| 2. Poultry-livestock-seed and plants | 40,000 SR |
| 3. Irrigation-Improvement of ditches-diversion structures, etc. | 100,000 SR |
| 4. Building-for local community workshop to repair tools, etc. | 2,000 SR |
| 5. Equipment and materials needed to demonstrate insect and plant disease control | 2,000 SR |
| 6. Equipment and Storage Room | 12,000 SR |
| 7. Petroleum Products for estimated vehicles (2) | 5,000 SR |
| 8. Housing and Maintenance | No figure |
| 9. Miscellaneous Material, local labor, etc. | 15,000 SR |
| 10. Salaries, maintenance of agricultural counterparts and for specialists who would work in several locations | No figure given. |

Total -SR175,000 to 200,000 per station.

It was stressed that buildings, workshop, etc., would be kept as simple as possible using native material.

The Director General stated report could be taken as basis for growth of agricultural stations. He noted that the Agriculture Department was considering establishing a stock farm near Jidda at Kilo 10. SAG had instructed a contractor to put up buildings planned by a poultry specialist. He asked what technicians Point IV planned to provide and was told one (1) for each station plus six (6) for general work.

Mr. Dunaway stressed the fact that a technician could have only a limited influence and urged the need of having 4 - 5 counterparts learning with each TCA man. In this way teaching and experience could be multiplied and gradually more and more farmers reached.

The Director General reviewed the above figures and questioned the amount for the workshop. In general, he appeared to accept Eden's figures. He did not inquire as to portion to be borne by Point Four and SAG.

He proceeded to describe the proposed over-all agricultural program for the coming year. The first is to be the proposed FAO Qizan Project which it is planned will be developed along lines successfully applied in the Sudan known as the Gezira Scheme. This is operated by the Government, two companies and the farmers. He gave a brief description of the project and proposed following a somewhat similar one in Qizan with SAG and an American concession company providing the funds. It should be noted that this is the first time such a plan has been put forth. Also that until recently the Director General had spoken against the FAO. He said he would send a copy of a report on the matter to Point Four.

2. Agriculture Station Units
3. Animal Husbandry Program
4. Upkeep and maintenance of 2000-plus pumping units now in the country.
Repair shops and spare parts are to be imported by SAG.

He stated that SAG would provide 42,000L for completion of the Qizan survey. He asked if Point Four was going to undertake repairing the Jidda-Qizan road and the Qizan harbor. Mr. Dunaway replied that TCA had never proposed harbor work but did propose purchasing road machinery for road repair work.

The Director General noted that the Aerial Survey of Qizan was to be completed by SAG with Glen Brown helping SAG see that proper areas are covered. This work will cost approximately \$68,000.

The meeting ended on a friendly note.

Agri.

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TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

February 8, 1953

MEMORANDUM

TO: John A. Dunaway
Acting U. S. Director
Technical Cooperation Administration
in Saudi Arabia

FROM: Edward Betzig
Acting Program Officer

RE: Meeting with Director General of Agriculture and His Staff

On February 4, 1953, a visit was paid by Dr. Edens and Mr. Betzig to the Department of Agriculture for the purpose of meeting the staff members. On arrival a few minutes were spent with the Director General. He had not had time to read the letter by Edens re TCA proposals for agriculture. He inquired whether or not TCA would do agriculture work at Medina. He was informed such would be difficult due to restrictions on non-Moslems. In the discussion which followed, Dr. Edens emphasized TCA intention to work in several localities by stationing technicians in these places and backstopping them with specialists.

Accompanied by Abdulla Dabbag, Assistant Director of Agriculture, a visit was made to the various departments. Officials met included Mohamed Badkook, Chief of Horticulture; Sharaf Kazim, Geologist; Hassan Shatta, Ali Sadik, Statistician; Burhan Huesseini and Ibrahim Hussein, Agricultural Experts; Issal Al Ali, and others including a retired Egyptian Irrigation Engineer here on a special mission. Brief words were passed with all. In general, the reception was friendly and a genuine desire appeared to exist for TCA aid and advice.

The visit pointed up the very loose and weak organization of the Agriculture Department. It is obviously in great need of greater financial support on the part of SAG and also of strong guidance both professionally and administratively before it can effectively cope with the very serious problems confronting local agriculture. At this time it is difficult to conceive of the department being capable of running agriculture stations scattered across Saudi Arabia. Helping to organize a small but efficient Agriculture Department thus ought to be one of the first tasks undertaken.

Request for Organization

Chart of S. A. G. Agri. Dept.

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda

April 4, 1953.

Shaikh Sayyid Ahmed Obaid
Director General of Agriculture
Kingdom of Saudi Arabia
Jidda, Saudi Arabia

Dear Shaikh Obaid:

Some time ago I requested that you furnish me an organization chart of your Department of Agriculture with an accompanying list of personnel and work projects now underway. You agreed to do this. However, I am sure that it is due to the press of your duties and the many calls made on you that you have overlooked sending this information to me.

In order for the Point 4 Division of Agriculture to be of most assistance to your Department and to farming interests throughout the Kingdom, it is very appropriate that our personnel be familiar with your Department and its program of work. Also, I am sure you understand our need for this information to serve as a guide for coordinated efforts.

Therefore to recapitulate, I should appreciate receiving the following:

- a. An outline, or chart, of the present organization of the Department of Agriculture, which sets forth its divisions, departments or any other administrative units.
- b. A list of the personnel assigned to the above-named administrative units designating each one's major area of training or experience.
- c. A list of projects or work programs now being conducted in the Kingdom by your Department. If there are private individuals in Saudi Arabia who are carrying forward improvement programs, I should be glad to have that information.

Your assistance in this matter will be appreciated, and I am looking forward to hearing from you at your earliest convenience. Also, I am interested in hearing how you came out with your budget.

Sincerely yours,

W. J. Edens
Chief, Agriculture Division

cc: His Excellency Shaikh Abdullah Sulaiman, Minister of Finance.

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda

April 4, 1953.

Your Excellency:

I thought Your Excellency might be interested in receiving a copy of the letter I have written to Shaikh Ahmed Obaid, Director General of Agriculture.

The letter is self-explanatory, and the enclosed copy is for your information.

Very truly yours,

W. J. Edens
Chief, Agriculture Division

His Excellency
Shaikh Abdullah Sulaiman,
Minister of Finance,
Kingdom of Saudi Arabia.

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda

April 4, 1953.

MEMORANDUM

MEMORANDUM TO: Mr. Sadak Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

RE: Request for Translation and Transmission of Letters
to Shaikh Sayyid Ahmed Obaid, Director General of
Agriculture and to His Excellency Shaikh Abdullah
Sulaiman, from Dr. W. J. Edens.

It would be sincerely appreciated if you would make arrangements for the translation and transmission of the attached letter to Shaikh Sayyid Ahmed Obaid, Director General of Agriculture, from Dr. W. J. Edens, Chief, Agriculture Division.

It would also be appreciated if you would make arrangements for the translation and transmission of the attached letter to His Excellency Shaikh Abdullah Sulaiman forwarding with it a copy of Dr. Edens' letter to Shaikh Obaid.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

Agriculture

Comments on SAG

Agri. Budget.



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

March 25, 1953

ADDRESS OFFICIAL COMMUNICATIONS TO

Shaikh Sayyid Ahmed Obaid,
Director General of Agriculture,
Jidda, Saudi Arabia

Dear Sayyid Ahmed:

This communication is in response to your request that I express my opinion concerning the Department of Agriculture budget proposed by you and your staff for the next fiscal year.

In considering the Saudi Arabian Government's obligation to the welfare of its people who are largely rural and make their living from the soil; and when considering that most farming is carried on under adverse circumstances due to very unfavorable climatic conditions; a generous budget appropriation is essential to carrying forward a progressive national agricultural improvement program in keeping with the efforts of those who till the land.

A review of the budget reveals the request of funds for research, extension work, instruction, stimulation of initial investments by farmers, and the making of installations that will mean much to the total economy. Sound research alone in determining more productive varieties of crops, greater production per animal unit, the use of fertilizers, marketing dates and other farm products, and in the control of locust and similar pests will result in economic and social returns many times the initial expenditure or investment.

I note your budget request greatly exceeds the current budget for your department. I assume you have carefully considered how your organization and activities will be stepped up so that funds now requested can be used for the promotion of a well-rounded and efficient program designed to improve agriculture in Saudi Arabia. However, since my experience in your country has been very brief and I do not know the details of your present department organization and its various activities, I am not in a position to take a definite attitude towards requested funds for specific items set forth in your budget request.

I shall be glad to study with you, plans for the expenditure of funds for various projects and serve in an advisory capacity at any time.

With best wishes for you and your Department, I am

Sincerely yours,

William J. Edens
Chief, Agriculture Division

cc: Shaikh Abdullah Suleiman
Minister of Finance

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TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

March 25, 1953

MEMORANDUM TO: Mr. Sadek Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway

RE: Request for Translation and Transmittal of
Attached Letter to Shaikh Sayyid Ahmed Obaid,
Director General of Agriculture, from
Dr. William J. Edens

It would be appreciated if you would arrange for the
translation and transmittal of the attached letter to the
proper Government officials concerned.

John A. Dunaway
Acting U. S. Director of Technical
Cooperation in Saudi Arabia

File
Agri. Program
15

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February 19, 1953

Technical Cooperation
Administration,
American Embassy,
Jidda, Saudi Arabia.

Your Excellency:

On February 15, 1953, Shaikh Ahmad Obaid, Director General of Agriculture, and I discussed items that appeared appropriate for inclusion in his next fiscal budget to be used in the joint effort by the Saudi Arabian Government and the Technical Cooperation Administration to improve agriculture in Saudi Arabia. During the discussion, I suggested certain items that should be included in the budget to be procured and used upon approval by Point 4 technicians and their Saudi Arabian counterparts.

The items are herewith listed, and they are appropriate for agricultural improvement in most communities or areas. However, the amounts of funds indicated for certain items are on a single community basis:

1. Approximately 10 acres of land for a demonstration and experimental plot.
2. Procuring improved livestock and poultry for breeding purposes and stocks of plants and seeds (40,000 SR).
3. Labor and materials for repairing and building dikes, digging diversion ditches, repairing and constructing small earthen dams, and leveling land for better irrigation practices (100,000 SR).
4. Equipment needed for a community workshop when appropriate (5,000 SR).
5. Equipment and materials for demonstrating the control of insect pests and plant diseases (5,000 SR).
6. Equipment shed, storage room and a necessary enclosure at the demonstration plot (12,000 SR).
7. Petroleum products (gasoline, oil, grease) required for

travel

His Excellency Shaikh Abdullah Salamin,
Minister of Finance,
Jidda, Kingdom of Saudi Arabia.

travel vehicles (not less than two) (5,000 SR).

8. Miscellaneous local labor and materials when needed (15,000 SR).

9. Agricultural counterpart personnel as follows:

One for each Point 4 stationed agriculturist.

One for each Point 4 agricultural specialist.

10. Housing and maintenance for Saudi Arabian counterpart personnel.

Note:

(1) It is understood that each Saudi Arabian counterpart will serve also as interpreter to the Point 4 technician with whom he is associated.

(2) Land reclamation of any consequence would involve additional items of expense.

I should like to make it clear that the number of riyals for each of the above items is only an estimate. Should some of the funds not be expended, they could be used for other worthy causes by the Department. On the other hand, the Director General may see fit to increase the amounts based on his wide experience with agriculture in this country.

Item 9 sets forth agricultural counterpart personnel to be furnished by the Department of Agriculture. As outlined in my letter to you January 28, 1953, Part 2 - b, c, Point 4 will provide a staff of specialists to be stationed in Jidda; however, these specialists will spend the most of their time in the areas where agricultural improvement programs are initiated. There will be a specialist in each of the following fields: agronomy (crops), animal ~~industry~~ ^{husbandry}, soils, entomology, horticulture, and farm irrigation. This staff of six specialists is to be matched with six men by the Department of Agriculture to serve as counterparts in the planning of research, demonstrations and extension work.

In addition to the above six men, the Department of Agriculture will be expected to furnish one agriculturist to be stationed in each community, or area, where an improvement program is started. This man will serve as the Government (Department of Agriculture) counterpart to the Point 4 technician who, likewise, will be stationed in the community. As the program progresses, it is hoped that several men, or counterparts, will be assigned by the Department of Agriculture to each community improvement program as a means of training as many Saudi Arabians in research, demonstrations and extension work as it is possible. Men thus trained can become the leaders and supervisors in a national program of agricultural improvement.

The method of approach to improve agriculture in Saudi Arabia must be simple and direct. Farmers, the world over, are a conservative people, and usually want to see changed practices of production

demonstrated

demonstrated relative to their practicality and value. This situation is more so true when written instructions cannot be depended on. On the other hand, when farmers have had better farm practices proven to them, they are usually very cooperative in their adoption.

At your early convenience, I should be glad to discuss with you, and others whom you may wish to be present, the general plan Point 4 expects to follow in an agricultural improvement program as given in my letter to you January 28, 1953; and the proposed budget estimates and needed Agriculture Department personnel as set forth in this letter.

Sincerely yours,

William J. Edens, Chief,
Agriculture Division

cc: TCA/W
Dr. Edens- 2

JADunaway
TCA:WJEdens:pm

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F-2
Comm.
Dev.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

February 21, 1953.

MEMORANDUM TO: Mr. Sadek Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

RE: Request for Translation and Transmittal of Letter
to His Excellency Shaikh Abdullah Sulaiman from
Dr. William J. Edens.

It would be sincerely appreciated if you would arrange for
the translation and transmittal of the attached letter to His
Excellency Shaikh Abdullah Sulaiman from Dr. William J. Edens,
Chief, Agriculture Division, TCA.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

Report By Abiach

on Hizon

~~On~~ Ozeziab Schenenda
Egypt.

Comments By Edens on Hizon
Program.

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Agri-
Comments -
Raja Project

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 13, 1953

MEMORANDUM

TO: Mr. Sadek Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway, Acting U.S. Director of
Technical Cooperation in Saudi Arabia

RE: Request for Translation and Transmittal of
attached Letter

Please arrange for the translation and transmittal of
the attached letter to H.E. The Assistant Minister of Finance.

JADunaway:o

Attachment

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda, Saudi Arabia

May 13, 1953

H.E. The Assistant Minister of Finance
Kingdom of Saudi Arabia
Jidda

Your Excellency:

I have the honor to acknowledge receipt of your letter of April 25, 1953, concerning certain aspects of the plans for the development of the Asir.

The engineering and cost data on the Gizan harbor and the outline of work and cost estimate of the special aerial survey requested by the FAO have not as yet reached me. These are necessary for proper consideration of these projects and I would appreciate your sending them.

I have the honor to be, Your Excellency,

Very truly yours,

John A. Dunaway,
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

March 12, 1953

In reply refer to:
Technical Cooperation
Administration,
American Embassy,
Jidda, Saudi Arabia.

Sayyid Ahmad Chaid,
Director General of Agriculture,
Jidda, Saudi Arabia.

Dear Sayyid Ahmad:

In compliance with your recent request, I am herewith writing to express my views concerning your proposed "Gizan Agricultural Project."

I think you are right in stating that the Saudi Arabian Government at times must take the initiative to develop certain phases of its economy. Particularly is this true relative to improving agriculture in many communities. However, as you already know, careful consideration must be given to factors which are basic to the success of any business scheme. Saudi Arabia has considerable land suited to agricultural production, provided water can be made available for irrigation. The Asir is not without this limitation though it is in the highest rainfall area of the country.

If the Asir had a river with abundant water that could be tapped, as in the Sudan, increased agricultural production possibilities would be greatly enhanced. However, if the water coming down Wadi Gizan could be more adequately harnessed for producing crops, your proposed Gizan scheme would have much merit.

I do not know the main crop, or crops, you have in mind for the Gizan area. I should think this would depend on the needs of Saudi Arabia. Cotton in the Sudan is the principal crop, and it is produced primarily as a cash crop for exportation. It would appear that any agricultural project in Saudi Arabia should have as its first purpose the production of food for domestic consumption since large quantities of food are imported. Also, any efficient production for domestic consumption would depend greatly on improving transportation facilities, particularly highways tapping the Gizan area and leading to populated centers that now depend greatly on the importation of foods and other merchandise.

In summary,

JADunaway
TCA:WJEdens:pm

In summary, I should like to state that the project you propose for Gizan would be a forward step in the development of agriculture in the Asir provided (1) adequate water can be supplied, (2) crops would be produced that best meet the needs of Saudi Arabia, (3) adequate transportation facilities would be provided for distributing the products, (4) satisfactory participation by all partners in earnings of the project is insured, and (5) steps are taken to train farmers in the fundamental principles of crop and livestock production. I mention these five items since they are so important in any agricultural improvement program.

I should be glad of the opportunity to discuss further this matter at your convenience.

Sincerely yours,

William J. Edens, Chief,
Agriculture Division.

TECHNICAL COOPERATION ADMINISTRATION

March 12, 1953.

MEMORANDUM TO: Mr. Sadek Hussein, Director
Liaison Office for Technical Assistance

FROM: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

RE: Request for Translation and Transmittal of
Attached Letter to Shaikh Sayyid Ahmed Obaid,
Director General of Agriculture, from
Dr. William J. Edens

It would be appreciated if you would arrange for the translation and transmittal of the attached letter to Shaikh Sayyid Ahmed Obaid, Director General of Agriculture, from Dr. William J. Edens, Chief, Agriculture Division.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

To: Denonway
From: Eden

Re: Letter to Finance Ministry and a
suggested Agricultural project for
Zigra by Agr. Director Ahmed Obaid.

Director Obaid has requested that
I write my opinion concerning the
his suggestion for developing
the Zigra area. Later I should
like to discuss this with you
and others -

5/5/72

Gizan Agricultural Project

20 Jan. 1953

This Project passes through three fundamental stages. First stage - technical studies and aerial mapping; second - survey; third - execution.

As for the first stage, the Government has gone through it through the F.A.O. and the T.C.A. and this took more than two years.

The second stage, i.e., land survey of Wadi Gizan which is a part of the great Gizan Project, the Government shall go through it through the F.A.O. advisors and this work shall cost about half a million riyals.

The third stage, i.e., the execution stage, shall be started when the surveying is completed by a company composed of three partners - the Government, the farmers and an agricultural Arabic - American firm. The execution shall be on the following basis:

1 - The work of the Government in addition to what has been mentioned is:

a - The construction of dams and primary canals as well as the drilling of artesian wells for water supply.

b - The furnishing of state lands as well as of the lands of the farmers on agreement with them.

c - The reparation and development of Gizan harbor in such a way as to enable the importation of large machineries and the exportation of crops.

d - The reparation of the road connecting Gizan with the work areas.

2 - The work of the agricultural firm is:

a - The ploughing and the leveling as well as the cleaning of the land and the offering of seeds together with insecticides and all agricultural requirements.

b - To administrate

- b - To administrate the work and to secure the necessary employees together with field employees and accountants. This work should be done under the supervision of the Government.
 - c - The construction of houses and stores and other necessary buildings.
 - d - To advance to the farmers the money necessary for their work and to secure their living.
 - e - To do the transport and the ginning at the expense of the firm.
 - f - The exposing and the selling of the agricultural crop.
- 3 - The work of the farmers and the landowners consists of offering their land to the Government at a rate to be agreed upon while the Government pays them cash for a definite number of years (to be determined later). The company employs the farmers at their own will as (workers) at definite rents and privileges to be agreed later on between the company on one side and the Government as representing the farmers on the other side.
- 4 - Profits are shared by the Government and the company and a part of the profits is given to the farmers either as cash or as a **form of social effort** for raising their standard of living. The profits shall be shared up at rates to be agreed upon according to the efforts and expenses each partner puts in the Project.

5/5/72

December 26, 1952

H. E. The Most Respected Deputy Finance Minister.

Greetings and respects. In spite of the fact that three years have already passed since the FAO employees got in touch with our country and started their technical work and their numerous studies in Gizan Area, they have not yet submitted to H.M.'s Government their reports on their work.

The last attitude has motivated the Organization to respond to the demand of the government and to submit the reports of its advisors together with its remarks on them.

And the method of execution shall continue.

With our present possibilities in the Department of Agriculture, we undoubtedly cannot study and discuss these reports and carefully show their false and true phases for they are technically new not only to the Kingdom but to most of the Middle East countries.

Usually a project such as that of Gizan cannot be undertaken altogether by any government or by any definite group of people or companies for it consists of a technical as well as of a social and productive - commercial side and governments do not practice commercial affairs and so it is impossible for them to succeed in such an enterprise as that. On the other hand H.M.'s Government cannot risk to undertake such a project at its own expense which fact would only mean that the Government is giving the money to irresponsible alien persons to use it the way they want and to direct it primarily towards their own benefits and to proceed in complicated studies and technical requests that cannot be discussed once the project has already consumed a large part of the money.

To my mind the only way to realize the project of Gizan as well as any other useful agricultural project in this Kingdom is through cooperation, thus we would be doing what other governments and nations have done.

The first step which the Government must take is to study the general report which shall arrive from the Organization together with the advisors' reports and to study and discuss all these reports as I have mentioned.

To do this there are two ways: first - we either commit it to Point 4 to study and discuss it and to comment on it, or - second - to commit it to a universal agricultural company that has already undertaken such big project. After this comes the execution state (and to my mind this does not differ from the method which the Government followed in fructifying its petrol resources with the ARAMCO, taking into consideration the difference in the nature of the two works.)

The execution

The execution of such a project should be on the following basis:

The Government offers, in a special way, facilities and water supplies together with the land. As for the administration and production two universal and expert companies - one agricultural and the other commercial - must cooperate together. And since we do not have such companies in our country we shall be obliged to form an Arabic - American company (or from any other country) - a reliable company specialized in this field to apply and execute the project and to finance and fructify it and pay to H.M.'s Government as well as to the farmers their share in the annual profits.

We have an example of this project and that is the Djezirah Agricultural Scheme in Sudan that was started 40 years ago and that gave numerous and important results which led Aden, Hadramont, Pakistan as well as India and many other countries to apply it, and now Egypt is trying to do the same.

This scheme gave as a net profit in 1950 - 1951, 43 million E.L., and the share of the Sudanese Government alone amounted to 17 million E.L. The Gizan project, however, shall be larger and more productive and beneficial than that of Sudan. To give a clear idea about the way I see it from my own point of view I have the honor to display hereby an adequate summary of the Djezirah Agricultural Scheme in Sudan.

A Summary of the most important fundamentals
of the Djezirah Agricultural Scheme in Sudan

In 1910 - Negotiations about the scheme started.

1925 - The scheme started receiving water from the reservoir of Sinnar at the Blue Nile.

1950 - The first stage of the Scheme ended with the expiration of the concession of the two companies - the Sudanese Agricultural Co. Lt. and Kassala Cotton Co. Lt.

The scheme went on till the year 1950 as a partnership between the Sudanese Government, the farmers and the two commercial companies. The main purpose of this partnership was the production of cotton as a cash crop for exportation. Each partner had to do definite duties and would get in return a definite percentage of the cotton profits.

1 - The work

1 - The work which the Sudanese Government performed:

- a - Surveyed, from 1907 - 1910, the land included in the Scheme.
- b - Supplied the water and the land.
- c - Hired (compulsorily) the land from the landlords for 40 years, paying them rents that were equivalent to the highest general rent prior to the Scheme.
- d - Did not allow the landlords to collect money from the farmers (it followed that the mere ownership of a land was not at all entitled to a share in the profit.)
- e - Put the necessary capital for the construction of the Reservoir of Sinnar together with some primary canals in the Scheme.
- f.- Guaranteed to continue payments to supplying water for irrigation and land for agriculture.
- g. -The Government, in return (to supplying water and land) gets 40% of the cotton profits.

2 - The work of the farmers: 80% of them are local landowners and of their dependents of the local villages.

a - They have to pay all the expenses of the cotton till they deliver it at the local import stations.

b - They get in return 40% of the profits of cotton and they enjoy the following privileges:

(1) They pay nothing in return for the water and the land.

(2) They are allowed to plant the maize and the forage for their livestock and to irrigate them freely.

(3) They are exempt from taxes or tithes.

(4) The land is considered as their real property.

C - The area

1 - The canvas bags.

2 - The transports.

3 - The ginning.

4 - The insurance.

5 - The expenses of exposing the cotton in the markets.

The three

C - The area of one "holding" (40 acres) is planted as follows:

10 acres cotton

5 acres maize

5 acres beans

20 acres uncultivated

This arrangement depended on the capacity of the farmer as well as on the presence of water and the quality of the soil.

3. The work of the two companies:

a - to clean and reclaim the land.

b - to administrate the Scheme as follows:

(1) To furnish it with field laborers and with accountants.

(2) To furnish the necessary housings and stores and other constructions.

(3) To advance money to the farmers so they can hire additional workers.

(4) To cover all transport and ginning expenses.

(5) To expose the crop for sale in the market.

c - The two companies get 20% of the cotton profits in return.

(General Rules)

4. - The profits of cotton are reckoned by adding the amounts resulting from the sale of the cotton to a common account and deducting all the expenses paid after the receipt of the crop from the farmers (in local import stations).

These expenses include:

1 - The canvas bags.

2 - The transports.

3 - The ginning.

4 - The insurance.

5 - The expenses of exposing the cotton in the markets.

The three

The three partners used to share all these expenses and then every one had to discount his own expenses from the common account to arrive to his net profit. The Government, therefore, had to discount what it had put in irrigation and lands while the company had to discount construction and administration expenses and the farmer had to discount the loans he got from the two companies as well as the other individual expenses which he had put in the cultivation in addition to his loans.

5. - What is worth mentioning is that some of the operation expenses, i.e. (the importation of fertilizers) and (the spraying of the crop) with some insecticides such as DDT are not discounted from the account of the "holding" in concern, but are discounted altogether from the account of the company. Logically the expenses of the uprooting of cotton at the end of the crop should fall on the farmer.

Since the year 1932 a part of the loans that are given to the farmers in return to such operations is added up with the common account as a sort of help to them. The principle of the collective assistances and loans that appear in the common account is applied on the farmers account - a general fund - and on the farmers account and the cultivation expenses are discounted from the "holdings" account at a fixed rate for every acre disregarding the number of times this operation was performed in one holding.

It is self-evident that this collective aspect of the project, though it might appear unjust to a person who casts a free and personal look on it, had a very great effect on the farmers who work in poor lands. It also played an important role in the social side for it aided the spread of purchase in an adequate manner and the elimination to a large extent of the necessity of borrowing money.

The council, besides its duty towards the two companies, made some extra activities to protect some of the requirements for social services and for the agricultural development. The council also repudiated the centralization of the crop on cotton alone, and also trained the natives to be self-dependent. It also supported the village councils which supervised numerous works beneficial to the farmers and raised their social standard.

The criticism directed at the (single crop policy), especially in poor years, led to the improvement of standard of living through the care of corn crops and vegetables and livestock.

The work

The work of the (Board of Directors of the Scheme) consisted of:

- 1 - The appointment of a successor to the two companies.
- 2 - The establishment of a department for social services.
- 3 - Carrying out some wide investigations concerning the agricultural possibilities of the Scheme.

I have passed to the second stage of the project looking forward for new horizons of useful and beneficial work, my aim being the general interest.

It is very evident that the Government of Sudan was unjust towards the landlords and the farmers. It hired the land at rates prior to the Scheme when the land was mostly uncultivated, which is really a trifling amount, thus tying them for 40 years. It also appropriated the land rights of the company. It was unjust to the farmers also through what is called the common account, for it used to share with them the net profits disregarding their irrigation and land expenses. The two English companies were first discounting all their expenditures and sharing afterwards the profits with the farmers, and they only agreed to discount the loans which the farmer might have made with them and - very small and limited indeed as they were - to my mind would not amount to 1% of what the Government and the two companies used to get.

Undoubtedly, H.M.'s Government when starting Gizen Project or any big agricultural project shall, by following the principles of the Islamic Law, be just - as it is in every project - and so each of the landlord, the farmer, the company and the Government shall enjoy equal and just rights according to the effort each partner puts.

If the Sudanese Government as well as the two companies have profitted of the Djezirah Irrigation Scheme for a period of 25 years without putting any effort for raising the social standard of the farmers and the people living in the Djezirah - H.M.'s Government, on the contrary, and with the help of the Almighty God - shall take care of the farmers and shall give their question good attention.

Director General of
the Agricultural Department

Letter from Obiad on

1. Agri Program.

Reply of Edens

Comment of Betzig

Jidda, Saudi Arabia

January 28, 1953

Your Excellency:

At the request of Shaikh Ahmed Obaid, Director General of Agriculture, I am writing (1) to express my opinion concerning his recent proposal to establish agricultural units to assist farmers, and (2) to set forth a plan Point 4 expects to follow in attempting to improve agriculture in Saudi Arabia.

1. I concur with Shaikh Ahmed Obaid in the thought that agricultural production standards are low, and that farmers should do everything economically feasible to improve farm methods and raise their standard of living. Also I subscribe to the proposition that agricultural production is basic to the welfare of Saudi Arabia and that any agricultural improvement effort by the Government should be centered on its citizens who till the soil. It is sound reasoning to propose that the first Governmental assistance program in agriculture be initiated in those areas more representative of farming interests and where the potential training of agricultural leadership is high. Such emphasis would tend to insure local leadership that would successfully carry on an effective farm program after initial stimulation by the Government.

On the other hand, I do not believe it advisable for Saudi Arabia to attempt to bring improvement programs "to farmers in all the areas and districts of the Kingdom at the same time." This is a very worthy thought, but the lack of trained personnel and the large financial outlay required would be limiting factors. Also, it is my opinion that heavy farm equipment should not come into the farming pattern until agricultural specialists and the farmers concerned have studied farm needs closely in their respective communities, or areas, and have decided that such equipment would enable them to produce as much or more at a reduced cost per unit of production. Often times when farm methods are "old, laggard and inefficient," the adoption of improved methods in plant and animal breeding, feeding, selecting wisely, fertilizing, controlling pests and diseases and managing the farm can bring about much higher production with little added expense, and without the use of high cost equipment. Should it be advisable to develop new farm lands

His Excellency Shaikh Abdullah Sulaiman,

Minister of Finance,

Jidda, Saudi Arabia.

of considerable acreage, heavy equipment would be needed for land leveling and layout, and would of necessity become a part of initial investment.

2. The following is a general plan Point 4 expects to follow in an agricultural improvement program.

a. In cooperation with the Saudi Arabian Government, select rural communities, or areas, in which to initiate programs of agricultural improvement.

b. Station Point 4 agricultural technicians and their Saudi Arabian counterparts in areas selected for agricultural improvement. Their objective will be to advise with and teach present and prospective farmers improved farming methods, thereby increasing production and raising the standard of living. Point 4 technicians will supervise and be responsible for all work undertaken, but will be assisted by their Saudi Arabian counterparts.

c. In addition to technicians stationed in the various areas, Point 4 proposes to recruit a staff of specialists in the fields of agronomy (crops), animal industry, soils, entomology, horticulture and farm irrigation. These specialists will be responsible for providing guidance and assistance in each area program by being responsible for planning and supervising needed research, demonstrations, and other specific action programs for the purpose of improving farm practices pertaining to crops, livestock, insect pests and diseases, irrigation and land development. The Saudi Arabian Government will be expected to furnish counterparts to work with the specialists so that later they will be able to conduct such work without the aid of Point 4 technicians. The work of all specialists will be in cooperation with the technicians stationed in the areas.

d. An experimental and demonstration plot of land will be established in appropriate areas where a modest program of experimentation will be conducted to determine the more desirable types and varieties of crops for farmers in the respective areas. Also this plot of land will be used for appropriate agricultural demonstrations. The local or central Government will be expected to provide the small acreage of land required for such plots.

e. Since agricultural improvement programs will be a joint and cooperative effort by the SAG and Point 4, equipment and materials necessary to the effectiveness of Point 4 technicians' work in the various areas will be supplied by the Saudi Arabian Government and Point 4 according to provisions of project agreements, which will be effected to meet the needs of designated communities, areas, or specific action programs.

f. In addition to this community, or area, approach to the improvement of agriculture in Saudi Arabia, it is the purpose of Point 4:

(1) To foster the improvement of Governmental services to agricultural producers by assisting in the development of a strong Department of Agriculture which will place increased emphasis on agricultural research and extension work.

(2) To develop greater confidence on the part of farmers of Saudi Arabia in the services which their Government will provide.

(3) Furnish technical assistance to the Government in establishing on-job training for farmers in major farm enterprises, and in organizing elementary agriculture instruction.

(4) To encourage the development of new farm lands where sufficient water is available, and where such development appears economically feasible.

(5) To provide technical assistance to the Government in the development of a farm marketing program.

As Chief of the Point 4 Agriculture Division, I am looking forward to cooperating with you and the Director General of Agriculture in carrying forward a program of work as herewith stated.

Sincerely yours,

William J. Edens, Chief,
Agriculture Division.

William J. Edens, Chief,
Agriculture Division,
Point 4, U. S. Department of
Technical Cooperation to
Saudi Arabia

JADunaway
TCA:WJEdens, pm

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TECHNICAL COOPERATION ADMINISTRATION

TCA Jidda, Saudi Arabia
January 29, 1953.

MEMORANDUM TO: Sadek Bey Hussein, Director,
Liaison Office for Technical
Assistance

RE: Request for Translation and Transmittal of Letter
to His Excellency Shaikh Abdullah Sulaiman from
Dr. William J. Edens, Chief, Agriculture Division,
TCA.

It would be appreciated if you would make arrangements
for the translation and transmittal of the attached letter to
His Excellency Shaikh Abdullah Sulaiman from Dr. William J. Edens,
Chief, Agriculture Division, TCA.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

Jidda, Saudi Arabia

MEMORANDUM

December 10, 1952

TO: Dr. Stratton

FROM: Edward Betzig

RE: Comments on letter from the Director General of Agriculture to the Deputy Minister of Finance concerning the Agreements in Agriculture and Rural Community Development

Agriculture
X Community Development

X Comments or Agreements

X Community Development Project

The first thing which strikes the eye is the statement that Point Four does not provide all of the assistance needed to improve agricultural conditions in Saudi Arabia. He would have Point Four bring aid simultaneously to all farmers in "all the areas and districts". Hence he opposes a program concentrating on one district to the exclusion of others.

Certainly, given the magnitude of the agriculture budget of Point Four, it was never contemplated that "all the areas and districts" would be aided. Even if the budget were a large one, TCA, or any organization working in Saudi Arabian agriculture would find it most difficult to work in all areas while essential regional data concerning such factors as water resources, water storage possibilities, rainfall, soil conditions and other necessary details is largely lacking. There is also the very serious shortage of trained Saudi Arabian personnel needed to carry out the proposals of the technicians.

Even a multi-million dollar project, extended over several decades, would have to be carried out slowly until information and experience were gained as to methods of operation. Beyond the lack of knowledge and personnel, the Director General ignores the harsh realities of the Saudi Arabian situation. He states that the local farmer "does not know how to utilize the rich resources at his disposal". This ignores, among other things, the desert conditions characteristic of Arabia; its rain and water shortage, the widespread saline soils, poor drainage conditions, nearly complete lack of mineral, animal, and green manures. Indeed the Arabian Peninsula is, unfortunately, one of the most barren areas on the globe. Its agricultural resources are of the poorest. Also to be considered are the absence of an inter-regional road network and the fact that the country is sparsely populated - with one inhabited area separated from another by desert and mountains. Save for the Asir and a few oases, the rural economy of Arabia was, in the past, more of a herding-grazing type than of the settled, cultivating nature. Such a tradition does not produce the type of devoted agriculturist readily capable of making the desert land produce crops.

In economic terms, Saudi Arabia is a marginal to sub-marginal agricultural area. Production costs are high. Were it not for the necessity of having a certain food production as insurance in times of international crisis, it is probable that most food stuffs could be purchased abroad more cheaply than it could be grown in Saudi Arabia. A very large money outlay for roads, water conservation schemes, wells, soil and land studies and improvement, etc., will be necessary in order to appreciably increase food production. The money spent for such projects might be more economically spent in other development projects. Saudi Arabia is not so rich that she can spend her oil income without careful planning. Indeed, agricultural projects should only be undertaken if their economic utility is clearly evident. Potential new lands are few. Enormous sections are wholly useless. The date is the only agricultural product which has been produced in sufficient abundance to have even a fair surplus for export.

Thus Point Four faces no easy task. The intention is to work on a number of small pilot projects, as in Wadi Itwad, Wadi Kulais, etc., Other projects include technical aid to study and control plant and animal diseases which will have application over many areas of Arabia. The study and development of wool and meat producing sheep and goats would be of value to the country. This latter project should be seriously considered. Unless Arabia undergoes a most unlikely climatic change or science discovers some cheap way to produce rain, the greatest part of the country can be used for little besides grazing and herding.

Viewed in the light of the above conditions, it would appear as though the Director General's proposal that seven agricultural units be provided is a most unrealistic one. Actually there is great disparity between the regions he mentions. Each has its own peculiar needs. No neat package unit could be provided which would bring forth miracles. The idea recalls the extravagant conception of "tractor stations" of other countries and one wonders if the idea is not a romantic plan to avoid confronting Saudi Arabian realities.

The main criticism of the "unit" idea would obviously be based on its very questionable utility and economic feasibility. The question is, "does this idea confront the real problems of Saudi Arabian agriculture and would it be any more than a costly experiment"? Other criticism must rest on the very high cost of such a proposal; the lack of agriculturists, mechanics, technicians, etc., to carry on the work in such large areas; the unfortunate emphasis upon "tractors of large, medium and small sizes, combine machines, drilling rigs", as though a main reason for low Saudi Arabian productivity was its low degree of mechanization.

"Quick and tangible" results, such as the writer speaks of, are most difficult to attain in Agriculture. Some of the horrendous failures of plans to produce quick results such as the British ground-nut and egg schemes in Africa come to mind. In many cases the likelihood of success was much greater and the conditions far more favorable than in Saudi Arabia. Unfortunately, imagination and enthusiasm have proven to be poor substitutes for knowledge, experience, and willingness to be flexible and to go slowly.

The Director General states that neither the FAO or Point Four plans will lead to an "agricultural revival in the country". Unfortunately, Saudi Arabian agriculture, save for oasis cultivation and in the Asir, was always precarious and of low productivity. It is not a matter of reviving it but of, in a sense, beginning it. It is doubtful if any scheme could make Saudi Arabia a garden spot; certainly not a plan which offers a "quick measure".

The statement concerning the "two million dollars to be spent by Point Four at Darb and Khulais" is an error as to the amount. Furthermore the \$500,000 Community Development Project for these projects is to cover the costs of development in a number of fields besides agriculture. These points should be clarified to prevent future confusion and misunderstandings. There is the further error concerning Point Four's \$2,000,000 budget. Actually the budget is for a little over \$1,500,000, spread over several divisions.

It is obvious that a meeting should be held with Department of Agriculture representatives at which time the Saudi Arabian Point Four program might be explained to them. Certainly, the Point Four seeks the cooperation and aid of the Department of Agriculture but little good will come of the matter if this department is permitted to harbour misconceptions as to the extent or objectives of our Program. Also, it would be tragic if anything we were to do would cause false hopes to be created. I have stressed the difficult nature of local conditions. Too frequently, foreign writers have glossed over these actualities and conjured up rosy futures based on slight evidence. Point Four contributions can help increase agricultural production, but neither we nor anyone else can create miracles unless nature or science change the basic geography and climatic conditions of the Arabian Peninsula.

His Excellency,
The Deputy Minister of Finance

Greetings

I perused the Draft Agreement for the Point IV Program in Agriculture and explained to Your Excellency some of the observations solely relating to the text of this Agreement. However, this Agreement and the relevant Agreements (whose purposes are the fulfillment of Projects and whose goal is far and of long duration) do not comprise all the assistance needed by the country nor are they the beginning of the work required. It is imperative that the assistance should come before such projects or at least in their outset, in the form of tangible and effective assistance to farmers in all the areas and districts of the Kingdom at the same time; And not by assisting one district and leaving the others or before the others.

Farmers, in all parts of the Kingdom, are poor, their production weak and the methods adopted by them are old, laggard and ineffective. With his meagre knowledge, the local farmer does not know how to utilize the rich resources at his disposal. To raise the standard of production of farmers and their ability is the corner-stone of agricultural promotion which the Government aspires to attain.

Major projects will neither bear fruit nor be of benefit as long as farmers are sticking to the old methods which do not enable them to utilize the wells, springs and fertile lands at their disposal.

Furthermore, Gizan, Darb, Bani Shu'ba or Kulais do not comprise all of the Kingdom.

I, therefore, think that the first assistance needed is to form seven agricultural units (mechanical and technical) each consisting of:

1. A number of bulldozers and tractors of large, medium and small sizes.
2. Combine machines.
3. Drilling rigs.
4. Equipment, insecticides and fungicides.
5. A workshop for the repair, exchange and maintenance of all such machines and other machines used by farmers.
6. A number of experts in the various fields of technical agriculture, supplied with good seeds and equipped with all that is necessary for the work.
7. A number of experts in animal diseases together with the necessary medicines.

The two million dollars that are to be spent by the Point Four at Darb and Kulais or the four million dollars or the fifty thousand pounds which the F.A.O. asked His Majesty's Government to contribute the first to found the Agricultural Institute at Gizan and the latter to establish the Agricultural Experimental Station also at Gizan will not lead to an agricultural revival in the country in the same degree as that rendered by the Agricultural Units previously referred to, as those units are a quick measure, paving the road and preparing the minds and unifying the forces towards fulfilling all the major projects agreed upon.

One unit will be stationed in each of the following districts:

1. Riadh and the districts attached to it, including the southern wadis.
2. Hassa, Dammam, Qateif and the districts attached thereto.
3. Qaseem, Ha'il, Baida, Oneiza and districts attached thereto.
4. Northern Districts, the station of which will be at Medina, and including the districts and wadis in the north.
5. Tihama District, including Gizan, Qunfetha, Leith and having its station at Gizan.
6. Sarah District, with its station situated between Shahrar, Dahran and Yemen.
7. Hijaz and Taif District, including adjacent territories and the wadis surrounding Mecca.

Each of these seven districts will have a complete unit empowered to rent these machines to farmers at reasonable rates which will help lighten the disbursements of these units and be within the scope of the farmers to improve their lands and earthen dams and enable them to till their lands. The duties of the experts will be to treat the plants and livestock of the farmers, to guide them and distribute the good seeds, to better their prevailing conditions and to look after their requirements and all that will help multiply their production in one year and make a real upheaval in the prevailing agricultural conditions.

The agricultural situation as well as the farmers will not benefit and their conditions will not improve if they are not the center of help, as they are the basic element necessary to all other major projects.

If farmers are not given quick assistance, the Government whilst drawing Agreements with the Point Four or the F.A.O. will continue to work and expend monies on the major projects without obtaining quick and tangible results. Also, without obtaining an actual help to its subjects whilst many years elapse and conditions remain at a stand-still and whilst production is as weak as ever. The outcome, when these projects come to an end, will be to find all local farmers unable to benefit from these projects or able to carry on after their expiration. The situation will then be critical and more dangerous.

The two million dollars that are to be spent by the Point Four at Darb and Khulais or the four million dollars or the fifty thousand pounds which the F.A.O. asked His Majesty's Government to contribute the first to found the Agricultural Institute at Gizan and the latter to establish the Agricultural Experimental Station also at Gizan will not lead to an agricultural revival in the country in the same degree as that rendered by the Agricultural Units previously referred to, as those units are a quick measure, paving the road and preparing the minds and unifying the forces towards fulfilling all the major projects agreed upon.

I believe that one million of the two million dollars allocated for the Kingdom in the budget of the Point Four will suffice to establish the Agricultural Units on beneficial and fruitful grounds. The other million will be utilized, if necessary, in Khulais or Wadi Fatima or in any of the projects to be agreed upon between the competent Government authority and the representatives of the Point Four.

The "Agricultural Institute" and the "Experimental Station" of Gizan, on the other hand, cannot be discussed or alterations for their future made before His Majesty's Government receives the complete reports, plans and other particulars, prepared by the F.A.O. experts after the completion of their field studies in the southern part of the Kingdom (both in Tihama and Sarah).

It will be necessary for His Majesty's Government to give its decision with regard to the two large sums allocated for the establishment of both the Agricultural Institute and the Agricultural Experimental Station within one district of the Kingdom with its vast area, to study the collective reports of the experts to be able to tell beforehand, the agricultural benefits desired, to determine the amounts that it will be called upon to contribute for these projects so as to balance its budget, to examine its financial position and to begin the work in accordance with the allocations provided for these projects in the budget. I have been informed by Dr. Tothill that the allocations required amount to \$1,000,000, and I have already written to the F.A.O. requesting it to furnish me with the reports of the experts and will discuss everything in due course.

This has been one of the main reasons that made me impress the necessity for a good liaison between the competent authority which will represent the view of His Majesty's Government and which will be subject to your instructions and guidance and between the representatives of the Point Four and F.A.O. This competent authority will, in compliance with your guidance and within the scope of its speciality, be in a position to benefit from the assistance of these organizations and work in corrdination with them to meet and remedy all that is deficient or necessary whenever possible.

I have to stress, anew, that this is the only correct and successful way for the goal which the Government aspires to and expends to attain. The decision is yours.

Sincerely yours,

Director General of Agriculture
Ahmed Obeid

Thwad

Khulais

Atba

El Durb

FILE COPIES

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UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia
January 10, 1953

MEMORANDUM TO: Sadek Bey Hussein
Director, Liaison Office
Saudi Arabian Government-Technical Cooperation

FROM: John A. Stacy
Acting Executive Officer

RE: Itwad Project

It will be appreciated if you will request the Baker Company to estimate the amounts and costs of materials required for housing facilities to be constructed near El Darb for the Itwad Project.

Attached are copies of the descriptions and enumerations of various component items of the proposed housing.

JADunaway
TCA:JAS Stacy:pm

ITWAD PROJECT

WALLS

To be constructed of native mud or mud brick approximately 15" thick and 11 feet high. Shower room walls to be plastered up 8' with neat cement.

FLOOR

Packed rock, gravel, sand and clay to a hard surface. The floor is to be filled in so that it will be 15 inches above ground level.

ROOF AND CEILING

- A. Mud and rock roof about 6 inches thick or as thick as natives build them, or
- B. Ceiling of joists and Celotex or boards. Roof to be A shaped and elevated sufficiently to allow ventilation between it and ceiling. Eaves to extend out two feet. Roofing to be of sheet metal.

WIRING

One central ceiling outlet for each room.
One outlet 2 feet above floor in each bedroom and three in the office and living room.

DOORS

Doors approximately 3' x 7' for all openings except the front door to office and the door to storage room. There should be double doors.

WINDOWS

Standard 4' window set, 4' above floor.

PLUMBING

Large kitchen sink with a large drain pipe.
Two showers and drain.
One water tank, 200 + gallon capacity on a stand 15' high. Stand not to be connected with house.
One outside spigot near water tank.

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

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Jidda, Saudi Arabia
January 5, 1953

MEMORANDUM TO: Mr. John A. Dunaway
Acting U.S. Director of Technical
Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief
Agriculture Division

RE: Itwad and Khulais Prospect

At present a trailer to house personnel is being repaired and equipped to be forwarded to El Darb.

Plans for the construction of housing for personnel are being formulated and Baker construction personnel will be consulted.

A general extension agriculturist is needed to initiate agricultural improvement work among Itwad farmers. This man should have the following qualifications: (a) reared on farm, (b) graduate of an agricultural college with a major in the field of agriculture, (c) skilled in farming activities, (d) minimum experience of five years as a successful county agricultural extension agent or teacher of vocational agriculture - preferably in an irrigated farming area, and (e) physically fit for outdoor activities and of good health. Also he should be willing to live in relatively remote and underdeveloped areas and in living quarters for only single men. This employee should be unmarried or willing to live away from family for long periods of time.

Since Wadi Khulais is a part of our present community development agreement, I suggest that a second person with the same qualifications as given above be employed to initiate agricultural work there.

As personnel for field work are requisitioned, transportation equipment should likewise be requisitioned.

Agriculture

Jidda, Saudi Arabia

December 11, 1952.

MEMORANDUM TO: Dr. Stratton

FROM: Edward Betzig

RE: Wadi Itwad, Wadi Khulais, Abba Projects

Attached to this memorandum are reports by Division Chiefs Brown, Edens, and Ferguson containing specific plans for projects in Wadi Itwad and Wadi Khulais in connection with the Rural Community Development Project Agreement. It is now proposed that due to previous understandings with the SAC concerning areas where work would be carried on, that two projects be drawn up. . .

PROJECT ONE entitled "Wadi Itwad, Darb
and
PROJECT TWO entitled "Wadi Khulais, Hadi Sham and Vicinity"

Under PROJECT ONE the tentative plan of work follows:

1. Completion of aerial survey and mosaics
2. Completion of any geological studies
3. Study of the road from Jidda to Wadi Itwad
4. Drilling test wells in sections proposed by Dr. Brown
5. The carrying out of a soil survey
6. The selection of the site where land will be developed for agriculture use.
7. Malaria and other disease control work.
8. Agriculture extension work at the village of Darb.

The contributions of the United States and the Saudi Arabian Government cannot at this time be wholly defined. The US will provide personnel to carry on the geological and water work - also the soil survey and agricultural extension work and malaria control.

The cost

Z

The cost of the aerial survey will be borne under a separate project agreement to that effect. Any contributions of the US for road improvement must be based upon thorough study as to what work is proposed and the cost of this work. It is understood that this work will be limited to improvement of the worst sections, and it is recommended that a possible American contribution would be \$100 to \$150,000 worth of road building machinery. It is proposed that road improvement be studied up to the Escarpment and a study be made as to the economic feasibility for the SAG's building a road to Abba.

Further American contribution will be in insecticides, seeds, agricultural implements for the American technicians and in machinery necessary to level the land selected for agriculture, and also such medical supplies such as DDT, etc, as are necessary.

It is believed that the Saudi Government has a sufficient number of drilling rigs here in Arabia or on order in the US, together with the necessary transport, with ~~which~~ to drill the wells. This would probably be a part of the SAG contribution, as also would be their contribution in the provision of road building and repair equipment.

It is proposed that once the land site has been selected that the housing for the technicians be erected nearby. Trailers have been proposed. However, the construction of adobe houses built of native material is to be investigated. It is expected that the Saudi Government will build these houses. It is probable that they will be furnished by the US with furnishings, electricity, and other utilities.

The size of this project must depend upon more detailed information to be developed when the above technicians are on the site.

It should be clearly understood that this will be a demonstrational project to serve as a model for the SAG in other areas in the Tihama. It is proposed that approximately \$300,000 of the total project budget be expended in this area.

PROJECT TWO

PROJECT TWO "Wadi Khulais, Hadi Sham and Vicinity"

This Project will be carried out in the following way:

1. Completion of any necessary aerial survey
2. Completion of geological studies
3. Drilling of test wells
4. Study of access roads connecting the area to the Medina Highway
5. The carrying out of a soil survey
6. The selection of the site where land will be developed for agricultural use.
7. Malaria and other disease control work.
8. Agricultural and extension work in the areas now cultivated.

Contributions will be divided similarly to PROJECT ONE with an estimated total expenditure of US funds of \$200,000.

It is expected that following signing of the agreement that project papers will be drawn up defining the respective contributions.

Each Division will place priority orders for the purchase of equipment which they call for. Recruitment of either contract or US Civil Service personnel will begin immediately. It is urged that due to the nature of the field work young men be recruited - either single or married. Our work will have to be carried on under trying conditions, but the success of the projects will depend upon their willingness to live and work for prolonged periods of time at the scene of operations. Each Division will provide specific and detailed job descriptions for necessary personnel.

Abba Project

ABBA PROJECT

It was decided at the meeting of December 11, attended by Dr. Stratton, Mr. Hussein, and the several Division Chiefs, that Abba should not be included in the Rural Community Development Project due to previous understandings with the SAG as to areas of work. It is urged that Abba be the scene of Point 4 activity. A well equipped field party at Itwas would complement work carried on under the regular program at Abba. The Abba Project would have the following functions:

- (1) To draw up and submit to the SAG the final report on the proposed dam. Point 4 would further provide engineering plans for the dam and a construction engineer. The local Abba Government aided by the SAG would provide labor and materials. Point Four, following further discussions, would provide some mechanized equipment such as trucks.
- (2) Working through the local SAG Health Department, provide a technician and certain supplies and equipment for disease control and sanitation work.
- (3) Conduct an agricultural survey and carry on extension work.
- (4) Propose aid to local educational institutions at whichever level was agreeable to the SAG -- primary or secondary. Examine the possibility of starting a small agricultural institute.
- (5) Provide a road engineer to survey the Abba-Darb, Abba-Najran, Abba-Jidda roads or trails and propose improvement in road construction plans to the SAG. Actual aid in the provision of equipment for the construction of these roads would be dependent upon costs involved and the potential economic utility.
(Studies should be made of the agricultural produce which might be grown in this area for sale in Jidda, Mecca, etc.)

This is to be drawn up as a separate and distinct project. Recruitment and US contributions are dependent upon the detailed reports which Division Chiefs have been requested to submit.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

December 11, 1952.

MEMORANDUM TO: Mr. Edward Betzig

FROM: Mr. G. W. Ferguson

RE: Public Health Plan for the Community Development Projects for
El Darb and Khulais

It is proposed to divide the health program into two parts (1) clinical and (2) preventive medicine. There should be a health center in each area where the clinic will be located and from where the public health or preventive medicine will operate.

There will be a need for one doctor, one male nurse and one sanitarian located at each center. These do not necessarily have to be American and probably will not all be Americans. The clinic will treat as many cases as it is able and has equipment and facilities for. It should be considered as an out-patient clinic.

The Sanitarian will devote his time to insect control, and improvement in water supplies and excreta disposal facilities.

Exclusive of American personnel, the program's budget should be as follows:

Personnel - - - - -	\$25,000
Buildings - - - - -	10,000
Equipment - - - - -	15,000
Supplies - - - - -	20,000
Transportation - - - - -	<u>15,000</u>
Total	\$85,000
Maintenance	<u>5,000</u>
	\$90,000

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

December 11, 1952.

MEMORANDUM TO: Mr. Edward Betzig

FROM: Dr. William J. Edens, Chief
Agriculture Division

RE: A Proposed Program for Improving Agriculture in the
El Darb and Khulais Communities, with Recommendations
for Abha

Part I - El Darb

El Darb is a village of approximately 200 houses, or a population of 1600. It is located some 20 kilometers inland from the Red Sea on the south bank of Wadi Itwad. Three villages are located up the wadi from El Darb and 10 villages are found between El Darb and the Red Sea. These villages have an average population of 160 each according to the estimate of El Darb's Amir. The homes are constructed of mud or mud and stick walls with thatch roofs, and the mode of living is very primitive. The basic bread crop is Durra and meat is supplied by sheep and goats. A few vegetables are grown when there is sufficient rainfall. The annual rainfall is approximately 8 to 10 inches.

The community of El Darb appears to have adequate farm lands which are diked to receive water from the wadi sails. When rainfall is distributed fairly well throughout the rainy season, better use is made of water coming down the wadi. Otherwise the diversion dams are washed out, and little water is received by the fields which stand ready at all times to receive water from the wadi sails. Fields in the El Darb community will exceed 1000 acres.

About 10 kilometers northwest of El Darb is found a larger tract of land well suited to the production of crops should water be provided for irrigation. The soil appears to be a silt loam and of good fertility. It lies well and the cost of land leveling should be at a minimum. Water resources surveys indicate that there is sufficient water stored beneath the surface to make the irrigation of much of this land feasible. Test wells are to be drilled at an early date to determine the amount of water that can be made available.

Since

Since the El Darb area has been selected for specific attention in community development, which includes an agriculture improvement program, it should be pointed out that the first technical assistance will be of necessity be that of helping the farmer improve farm practices now followed. In brief, this assistance would be provided in the following manner:

1. Establish a plot of land in the community to be used for crop demonstration. On this plot improved varieties of crops can be tested and seeds, seedlings and grafting stock can be produced for distribution to farmers.
2. Assist farmers in improving the use of available water resources (irrigation and drainage) and in the conservation of all natural resources.
3. In addition to the above, technicians will instruct and assist in the (a) improvement of livestock, (b) control of plant and animal diseases, (c) use of appropriate farm equipment, (d) preservation of foods, (e) improving the marketing of products, (f) management of farms, (g) training local leaders in agriculture, (h) and establishing a vocational agriculture school for youth and adults.

In the development of a community program in the El Darb area, it should be pointed out that this area is in a remote section of the country and is reached from Jidda by a trail which is rough and rocky beyond description in many places. Many of these places are practically impassible. It will be necessary to provide housing accommodations for technicians which will need air conditioning for at least six months each year. Some kind of medical assistance should be provided in case of emergencies, and radio communication facilities will be essential. Personnel for work in this area should be unmarried or men who are willing to be away from their families for long periods of time, and who are willing to live under rugged conditions. Food and water supplies will be problems. The above items are mentioned because they must be dealt with in any program in the Tihama.

The following

The following items are listed as being essential to initiating an agricultural improvement and reclamation program in the El Darb community with the possibility of giving a limited amount of technical advice to farmers in the Abha area. All equipment and supplies have been estimated for the El Darb community.

PERSONNEL

1. Irrigation Engineer
2. Soil specialist..Soil Classification,testing, use.
3. Agronomist
4. Animal Husbandman
5. Entomologist (Part time)
6. Horticulturist
7. General Agr'l Extension
8. General Mechanic (Farm equipment,including welding)

EQUIPMENT AND SUPPLIES

<u>Category</u>	<u>No. Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>G.T</u>
1. Fertilizer	5 t	\$60	\$ 300	\$ 300
4. Farm tools	-	-	2000	2000
Tool shed & storage house	-	-	2500	2500
5. Stationery gasoline motors	-	-	400	400
				5,200

10. Agriculture Equipment

- 8" turning plows	4	100	400
- one-row planters	2	100	200
- grain drill	1	175	175
- Hand concrete mixers	2	100	200
- Farm Wagons (Sand tires)	2	250	500
- Line spreader	1	150	150
- Fertilizer distributor	1	150	150

(Continued)

	No. Units	Unit Cost	Total Cost	G-T	Brt. Fwd:
- Mowers, tractor	2	\$175	\$350	/	\$5,800
- Disk Plows	2	150	300		
- Hoes, shovels, forks, etc.	1 lot	300	300		
- Small mule gear & attachments	1 lot	150	150		
- 2-section spike tooth harrow	1	75	75		
- Horticulture pruning set	2	75	150		
- Two-gallon thermos jugs	15	10	150		
- Two-wheel trailer (livestock)	1	250	250		
- Tandem disk plow	1	250	250		
- 1/2 row cultivators	4	20	80		
- spray equipment	-	500	500	4,030	4,030
					9,830
12. Jeep station wagons (4-wheel drive with sand tires & winch)	5	2000	10,000		
Dodge Power Wagons with sand tires & winches	3	2500	7,500		
Two spare parts for each critical point of above vehicles	-	-	2,000	19,500	
25. Insecticides and fungicides			1000		
27. Pharmaceuticals, drugs & vaccines			700		
30. Educational supplies			100		

(Continued)

Continued

<u>CATEGORY</u>	<u>NO.</u> <u>UNITS</u>	<u>UNIT</u> <u>COST</u>	<u>TOTAL</u> <u>COST</u>	<u>G-T</u>
13. Farm tractors (Large row types)	1	\$3000	\$3000	
Small tractor (Ferguson or Ford)	1	2000	2000	
Implements (Tractor)	-	-	2500	
Spare parts for above	-	-	1000	
DC 7 or 8 Cat. Tractor	1	-	10000	
Land leveler	1	-	5000	
2-ton power Carry scraper	1	-	4500	
Spare parts for above tractors		-	2500	
Marlin ditcher	1	-	175	30,675
16. Farm survey kit	1	-	200	
Soil testing lab. kit	1	600	600	
Soil survey kits	1	50	50	
Imported purebred bulls	5	-	5000	
Imported improved sheep	-	-	5000	
Imported improved poultry			1500	
Miscellaneous Equipment			1000	12,500
19. Improved seeds and seedlings			1500	
22. Petroleum & products			10000	
26. Insecticides and fungicides			1800	
27. Pharmaceuticals, drugs & vaccines			700	
30. Educational supplies			500	

Continued

<u>CATEGORY</u>	<u>NO</u> <u>UNITS</u>	<u>UNIT</u> <u>COST</u>	<u>TOTAL</u> <u>COST</u>	<u>G-T</u>
Housing facilities				
- Air conditioned trailers for sleeping quarters.	3	\$4,000	\$12,000	
- Air Conditioned trailers for office space	2	3,000	6,000	18,000
FARM Road (On developed land and to Darb)			20,000	20,000
Misc - Office Supplies and Equipment			600	
Woven wire stock fence			700	
Poultry wire fence			300	
12 rolls screen wire (fine mesh)			240	1,840
GRAND TOTAL:				\$126,545

Part 2 - Wadi Khulais

The Wadi Khulais Community is located about 40 miles north of Jidda. It is much smaller than El Darb but the pattern of agricultural development would be similar to that of El Darb. Some of the personnel required at El Darb can be used at Khulais. This will not be the case for equipment and supplies because of distance and travel difficulties.

Additional personnel for Wadi Khulais would include an Agronomist, Animal Husbandman and Horticulturist. Equipment and supplies would approximate one-fourth the cost at El Darb or about \$31,700.

It is believed that this could readily respond to a community improvement program. Similar efforts are now being made to improve health, education, and agriculture. Such a program, with technical assistance, could become a model for community improvement throughout the country.

It is suggested that serious consideration be given to helping construct a dam in Wadi Khulais near the old dam site. This additional water supply would greatly increase agricultural production in the entire valley. All desirable land has been brought under cultivation, however its productivity is limited by inadequate water supply and cultural practices.

Accepting the conditions necessary to construct a dam, an agricultural improvement program should not entail an expense of more than one-fourth the estimated cost of the El Darb improvement program.

Part 3 - Recommendations for Abha

Abha is the capital of Asir and it is centrally located in that province. Its population is approximately 3000. Community organization is quite evident by the existing service institutions. Homes of the people are very substantial with architectural design complimentary to any city.

Farms in the Abha community and those of adjoining wadis and villages are carefully terraced to make use of all available water and to conserve the soil. Farm houses are of durable construction and they possess the same architectural design found in Abha. Crops grown include wheat, barley, alfalfa, durra, onions, eggplant, peppers, pumpkins, tomatoes, pears, apples, grapes, young citrus, plums, peaches, mulberries, olives, figs and pumgranate. The common crop rotation is to follow sheat and barley with vegetables. All barnyard manure is conserved and placed on the fields. It is the only fertilizer used.

It is believed that Abha would readily respond to a community improvement program. Definite efforts are now being made to improve health, education, and agriculture. Consequently Abha, with technical assistance, could become a model for community improvement throughout the country.

It is suggested that serious consideration be given to helping constructing a dam in Wadi Abha near the old dam site. This additional water supply would greatly increase agricultural production in the entire wadi. All desirable land has been brought under cultivation, however its productivity is limited by inadequate water supply and cultural practices.

Excepting the assistance necessary to construct a dam, an agricultural improvement program should not entail an expense of more than one-fourth the estimated cost of the El Darb improvement program.

11 December, 1952

Memorandum to Dr. Stratton regarding proposed rural community development

Two places have been chosen from consideration of several sites. These are Darb, in the northern part of the Tihama al Asir, and the Wadi Khulais-Usfan area northeast of Jidda.

The Darb area has been studied and mapped, and drilling sites for exploratory water wells chosen. A churn drilling rig now in the Tihama will be used initially and if the sedimentary section is such that rotary method will be needed, a rig now in Jidda and leaving in a few days for the exploratory drilling on the Qizan water supply will be used. Pumping tests on production wells must be made before we can estimate the size of development.

Aerial photographs and a test drilling program are needed for the Khulais-Usfan project. The contractor for the aerial photography is scheduled to begin work within one or two weeks, as far as I know, and the drilling rig is ready in Jidda to proceed to the sites as soon as photographs and geology are studied. This work should proceed as quickly as equipment and personnel for other phases of the community development are available, except that the drilling is handicapped by lack of adequate transportation which is now reported to be on its way from the United States by the drilling contractors.

Glen Brown
Natural Resources

Agriculture

Monthly Activities Reports

agri file

-2-

American Embassy
Jidda, Saudi Arabia

MEMORANDUM

August 30, 1953

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia
Chief,
FROM: W. J. Edens, Agriculture Division

SUBJECT: Monthly Activity Report - August 1953

Critique

The Agricultural staff has been augmented by one additional technician, Mr. Herbert E. Schwan, Range Management and Conservation Specialist. Range reconnaissance surveys are now in process. Surveys are continuing in animal husbandry, and discussions are in process with the Department of Agriculture representatives relative to the establishment of a livestock demonstration farm, and the construction of three demonstration pit silos in that many wadis. Agricultural leaders are being selected to attend the 3-month study of water spreading and range management to begin in the United States September 20, 1953.

The date study is well underway, and Mr. Roy W. Nixon reports that results have been very satisfactory thus far. Mr. Parker and Mr. Schwan are planning an extensive range and livestock trip to some of the important interior livestock areas in Saudi Arabia.

The FY 1954 Agriculture Division budget has been revised in line with the increased allotment made available by TCA/W. Eight proposed projects have been set forth in this revision.

It has been quite evident ever since my coming to Saudi Arabia that the Saudi Department of Agriculture, as it is now organized and administered, is of little value to the country. Possibly steps can be taken at an early date to see if the situation can be improved.

Operation Summary

A. Progress

Mr. Herbert E. Schwan, Range Management and Conservation Specialist, arrived August 4. Mr. Schwan comes to us from Forest Service, U. S. Department of Agriculture, and has entered on his duties by starting a general reconnaissance survey of livestock grazing areas in Saudi Arabia. Other personnel is scheduled to arrive in early fall. The Chief of this division is quite concerned about

the recruitment suspension of an irrigation and land reclamation engineer. This man and an agronomist are two of the most important technicians needed in initiating an agricultural improvement program in this country. Almost a year has passed since the technical agricultural program agreement for Saudi Arabia was signed. Proposed projects now being planned, which must include crops and the better use of water, will depend greatly on these two technicians. Injurious insects are everywhere here in Saudi Arabia, yet recruitment of an entomologist has been suspended. So far as I know, no study has ever been made of insects in Saudi Arabia. TCA could make a very basic and substantial technical contribution in the field of entomology.

The overall appropriation made available last week to this Mission will serve to stimulate present efforts and give a new lease on the Mission's life which was at a low ebb.

A new well has been brought in in Wadi Khulais which, according to the Natural Resources Division, will prove to be large enough for irrigation purposes. However, any irrigation water developed in this wadi will have to await qualified technical assistance in the field of engineering to make the water available to crop land. The same is true for Wadi Itwad of the Asir-Tihama.

The date study now in process in the Persian Gulf area is well on schedule. Mr. Roy W. Nixon, USDA date specialist, reports that work thus far is satisfactory. The study of varieties and cultural practices is concentrated at Hofuf, Qatif, Dammam and El Kharj.

Vehicles for the Agriculture Division, ordered last February, have not arrived. Their further delay will soon cause field travel difficulties.

Program Development

The increased budget places the division in a position to begin talking project development. For several months, and until just last week, the division was in no position to discuss program development.

The Saudi Department, for some time, has been interested in developing a livestock demonstration farm near Jidda on the Mecca road. Mr. T. O. Parker has been meeting with Mr. Mohammed El Bakry, animal husbandman of the Saudi Department of Agriculture, to discuss their plans -- objectives, factors involved, and a possible plan of procedure. There is much opportunity to demonstrate the use of better sires and feeding practices, and to develop foundation herds of sheep, goats, and dairy cows for the dissemination of their sires to various communities or centers. Mr. Parker has also assisted the Animal Husbandry Division make plans for a trench silo demonstration in three communities.

A search is being made to select two leaders in agriculture to take advantage of the three-month study of water spreading and range

management in the U. S. Thus far Mr. Sadek Hussein, TCA-Host Government Liaison Officer and former Agricultural Advisor to the Department of Agriculture, has been reported to TCA/W for attendance. An invitation is being extended to the Assistant Director of Agriculture to avail himself of this leader training award.

The present Saudi Department of Agriculture needs strengthening and reorganization from the ground up. The present Director is not qualified for his job and further, he is not sufficiently interested in work that the department is and should be doing. Furthermore, he absents himself from his office for long periods of time. It is my intention to take this matter up with the Finance Ministry when the time appears appropriate.

The FY 1954 budget for the Agriculture Division has been revised, based on the increased appropriation made available for personnel, projects, supplies and equipment, etc. Eight proposed projects have been set forth in this budget revision, and the same will be discussed, in general, with the Department of Agriculture officials when the Mission Director has confirmed Mission Division allotments.

Program Information None.

Technical Cooperation Programs other than Point IV

FAO is in the process of establishing a camp in Wadi Gizan.

Jidda, Saudi Arabia

August 2, 1953

MEMORANDUM

TO: John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - July 1953

Critique

This month witnessed the arrival of two technicians: Mr. Roy W. Nixon, Date Specialist, and Mr. Tollie O. Parker, Animal Husbandry Specialist. Mr. Nixon has initiated his work in the Al Hasa Province, and Mr. Parker is making a brief survey of livestock and livestock problems in the Hejaz. The Chief of the Agriculture Division spent about two weeks in eastern Saudi Arabia assisting Mr. Nixon in starting his program of work. To date some difficulty has been experienced by the host government in furnishing counterparts to work with Point 4 technicians. It is hoped that this matter will soon be overcome.

Detail project planning and initiation of work has been impossible during the past several months. Early in last fiscal year the Saudi Arabian Government backed out on furnishing living quarters for TCA personnel and vehicles for transportation. Consequently, funds budgeted for personnel, equipment, supplies, etc. were used for the above purposes. At present the FY-54 budget allotment is not known. There are no funds on hand with which to begin any work, except in Wadi Itwad. Since development work there awaits further exploration for a supply of irrigation water which is needed under present circumstances to make the project feasible, and since a soils technician and an irrigation engineer are not on hand to provide preliminary guidance, the project is at a standstill.

Mr. Thomas J. Moon suffered an automobile accident while enroute from Jidda to El Kharj which required that he be hospitalized at the Dhahran Air Base Hospital. His condition, as yet, is considered serious.

Operation Summary

A. Progress

During the first part of the month a study of dates was undertaken in the Al Hasa Province to determine the best varieties for further

propagation

propagation, and to give instruction in improved cultural practices. This study is being conducted by Mr. Roy W. Nixon, Date Specialist, of the U.S. Department of Agriculture, who comes to us on special detail from the USDA Date Experiment Station, Indio, California. Mr. Nixon is on a six-month assignment and his studies will be in the Qatif, Hofuf and El Kharj areas. Major difficulties will be the desert travel between the three communities as well as trying to live.

Mr. Tollie O. Parker, Animal Husbandry Specialist, has been making a survey of livestock and livestock problems in this western area of the country. His counterpart, Mr. Mohamed Ally El Bakry, has arrived from Egypt where he has been studying livestock problems. Mr. El Bakry is an employee of the Department of Agriculture.

Mr. Herbert E. Schwan, Desert Range Specialist, is scheduled to arrive August 2, 1953.

The jeep station wagons to be used in the field by agricultural technicians have not arrived. This is going to be a serious handicap unless the vehicles arrive within the next few weeks.

Program Development

This month saw a continuation of exploratory well drilling in Wadi Khulais. Nothing exciting has occurred, but there is still hope of a supply of water for irrigation purposes.

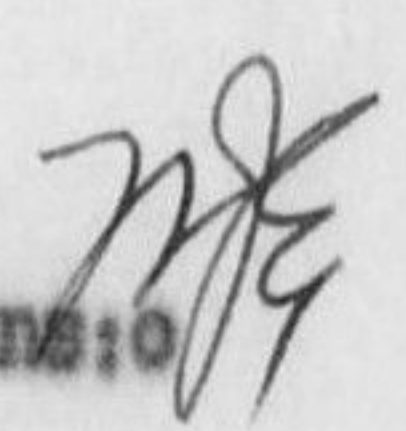
Program development is primarily at a standstill. Further development depends on the FY-54 budget allotment.

Program Information - None

Technical Cooperation Program other than Point 4

FAO is attempting to establish a camp in Wadi Gizan.

WJE:ens:0



American Embassy
Jidda, Saudi Arabia

MEMORANDUM

June 29, 1953

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Agriculture Division

SUBJECT: Monthly Activity Report - June 1953

Critique

Technical field accomplishment has been practically nil due to the lack of technicians. However, the recruitment of technical personnel continues to show signs of improvement. A date specialist will arrive July 1st, and a livestock specialist is now enroute to Jidda. The desert range specialist is in the process of orientation in Washington, and country clearance has been requested for another extension specialist. Not much progress has been made to fill two critical positions -- irrigation engineer and soil specialist.

Two vehicles have been dispatched to the Hofuf area to be used by the incoming date specialist. Both of these vehicles have been used considerably. Vehicles ordered in February 1953 for the Agriculture Division have not been shipped from the U. S. This appears to be unwarranted delay.

Field trips have been made to Wadi Khulais and exploratory drilling for water there continues. At present drilling at Wadi Itwad in the Asir is at a standstill. Statistics pertaining to crop production throughout Saudi Arabia have been obtained from the Department of Agriculture and tabulated.

Thought has been given to initiating agricultural work in areas other than Itwad and Khulais as personnel is sent to the field, until water development and road improvements have progressed further in the Asir.

Operation Summary

a. Progress

Little progress has been made due to the fact that no projects are in operation. Projects are not in operation because

of the lack of technicians. In addition, the one signed project agreement directly affecting the Division of Agriculture -- The Rural Community Development Project -- is an agreement that was entered into with unnecessary haste and with little regard for ways and means of implementing it, though the Director was advised of problems and difficulties in a memo dated December 11, 1952, prior to signing the agreement. And because of a communication from TCA/W requesting that the Asir Community Development Project be expedited, a memo was prepared and submitted to the Country Director setting forth views of the Agriculture Division, the same to be forwarded to the Washington office. This memo gave a detailed description of agricultural conditions and operations in Wadi Itwad, problems that must be faced there, and suggested a procedure of action as follows:

1. Recommend to the SAG that active technical assistance in the Wadi Itwad area be deferred until ground water for irrigation purposes has been proven reasonably adequate, and improvements made on the rugged trail of more than 400 miles connecting Jidda and the Wadi.
2. Dispatch an irrigation engineer and a soils technician to Wadi Itwad to determine how the present system of obtaining surface water from the wadi can be improved, and follow up this study with concrete work in cooperation with the host government.
3. In cooperation with SAG, select a minimum of three community areas (including Khulais for the present) for developing improvement programs in agriculture, health, natural resources, transportation and vocational training.
4. Write project agreements for the selected communities and get them signed.
5. Begin assembling personnel, equipment and supplies to implement the project agreements.

The recruitment of personnel is improving. Mr. Roy W. Nixon, date palm specialist, is scheduled to arrive July 1st. His work will be concerned with the selection of the best date varieties to be propagated by date farmers, ways and means of propagation, and improved cultural practices. Mr. Tollie O. Parker, livestock specialist, will arrive in Jidda July 2nd. The Saudi Agriculture Department has arranged to have its livestock specialist return from Egypt where he is in training, to serve as counterpart to Mr. Parker. Mr. Herbert E. Schwan has been appointed desert range conservationist and is now being oriented in Washington. Country clearance has been requested for Mr. Fred A. Barham, extension specialist.

Men in the field are of little use unless vehicles are available for their transportation. Five vehicles were requisitioned

February 19, 1953. Purchase orders were not authorized until April 10. A telegram last week advised that the vehicles would be shipped within 60 days after the present strike. The vehicles should have arrived in Jidda before the strike began. The Agriculture Division will shortly have two field technicians and no suitable vehicles with which to begin work. A few of the Saudis are still looking hopefully to TCA, but the Saudi Arabian camel back is getting very weak.

Program Development

During the month exploratory well drilling has continued in Wadi Khulais. This wadi serves a relatively small population as compared with areas such as Fatima, Abha, Riyadh, Hofuf, Dammon, Qatif, et al. The Hofuf area has a population of about 150,000 and large supplies of water are available the year around. The above six areas are reasonably accessible, except Abha. The Mission's administrative policy thus far has been that initial efforts by the Agriculture Division in Saudi Arabia must be in either Wadi Itwad or Wadi Khulais. However, as technicians arrive in the field the Agriculture Division Chief, in cooperation with the host government, hopes to begin agricultural extension work in some of the above-mentioned localities where it is determined that technical assistance can be most effective. Officials of the Department of Agriculture concur in this viewpoint.

The proposed FY-54 budget will not permit the Agriculture Division to develop a program of much consequence. In fact, the budget provides only for personnel and training awards. Funds are not provided for supplies, equipment and travel - a perfect stymie.

Agreements and Requests None.

Program Information

It is my opinion that the Saudis are rather pessimistic concerning what TCA will actually accomplish in their country. Steps should be taken to overcome this attitude. More program action in the field and a country allotment in line with other middle eastern countries will do much to correct present attitudes.

Technical Cooperation Program other than Point IV

FAO has made little progress recently in field activities.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

MEMORANDUM

May 31, 1953

TO: John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Wm. J. Edens, Chief, Agriculture Division

SUBJECT: Monthly Activity Report - May, 1953

Critique

The recruitment of technical personnel showed signs of improvement during the month. An Animal Husbandman is now in the Washington office for orientation. Country clearance was obtained for a Desert Range Conservationist and date specialist, and clearance for an Extension Specialist has been requested. Three Saudis employed by the Department of Agriculture were approved for study in the U.S.

The Chief Agriculturist visited several important farming areas. These included the communities of Yenbo, Medina, Anazia, Buraida, Riyadh and El Kharj.

Agricultural improvement work in agricultural areas await the arrival of technical personnel.

Operation Summarya. Progress

Little progress has been made due to the fact that no projects are in operation. Work accomplished has been the general preparation for the arrival of technicians. The seed planted at one of the Agriculture Department farms are making a fair growth. This test may prove profitable provided the plants are not destroyed by sheep, goats, oxen and other native animals. Before continuing this work, it will be necessary to have the services of soils and crops technicians. The Chief Agriculturist visited several important agricultural areas in central Saudi Arabia.

Program Development

There are no specific projects in operation. Program development is still in the planning stage. About the first of July, 1953, work will

begin on the identification of the more profitable varieties of dates in the Al Hasa Province. This work will continue throughout the growing and ripening season.

While at El Kharj a visit was made to an expanding well drilling area. These wells are being drilled primarily by members of the Royal Family. Their delivery capacity is entirely too small, and some are on land where there is much doubt about suitability for farming. The soils specialist and irrigation engineer are needed badly. Advice is needed on land leveling, and this could develop into an important project.

Finance Minister, H.E. Shaikh Abdullah Sulaiman, is developing a farm near Riyadh. He wants it to be an experimental and demonstration farm for that area. At his request, Mr. Moon visited the farm and consulted with the Finance Minister and his farm manager relative to layout and irrigation. The Minister was promised further technical assistance when technicians arrive.

During the month Division Chiefs were informed of proposed budget allocations for the FY-54 program. The proposed amount of funds for personnel does not allow for a balanced technical staff in the basic phases of agriculture essential to (1) determining rural community improvement needs, (2) developing project plans based on these needs, and (3) providing minimum research leadership for a strong, progressive and continuous agricultural program. Furthermore, the proposed budget does not provide any funds for operating equipment, supplies, field travel and maintenance, which are real costs in any rural development program. Program development under these conditions has a rather dim outlook, for personnel sent to the Mission will be immobilized and have no demonstration, experimental and other instruction aids with which to make their technical abilities effective.

Plans are under way to provide the date specialist with living accommodations, government counterparts and means of travel. Drilling for water in Wadi Khulais is encouraging. However, it is the opinion of the Chief Agriculturist that land suited to cropping is rather limited. More definite plans can be made after the making of a soil survey. It is hoped that a soil specialist can be provided in the near future.

Agreements and Requests. None.

Program Information

Reports have been made to the Country Director concerning conferences and trips during the month.

Technical Cooperation Programs Other than Point 4.

FAO appears to be making little progress.

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TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 26, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of Technical
Cooperation in Saudi Arabia

FROM: Dr. W. J. Edens, Chief, Agriculture Division

RE: Monthly Activity Report - April, 1953

Critique

The agricultural program is in the same condition reported last month. There is still the same lack of technical personnel necessary to the development of project agreements and their prosecution. Not being in a position to initiate projects slows up the need for communications and activities normally expected. However, efforts are being made with every opportunity to further program planning. Attention has been given to housing requirements, types of project agreements, visiting wadi areas, and the planting of seed at two locations.

Operation Summary

a. Progress

1. The El Darb Rural Community Development Project remains at a standstill due to there being no technicians on hand to begin work. Further exploratory well drilling has not given satisfactory results. It is very doubtful that wells will be drilled which will provide water for irrigating the large tract of land northwest of El Darb. This situation greatly diminishes the over-all country value of the Asir project. With the arrival of the irrigation engineer, the possibilities of water spreading on this land will be investigated. It may be possible to make use of surplus water coming down Wadi Itwad by the construction of a low-cost dam.

Program Development

Trips early in the month were made to Wadi Khulais to inspect land suited to agricultural purposes. Representatives of the Natural Resources Division (TCA) accompanied us on these trips to investigate possible drilling sites. The limited land of any value was being cultivated, and the

surrounding areas were of course and fine sand. Some localities were growing plants that are indicative of a salty soil condition. Further exploration awaits the soils technician as well as the irrigation engineer.

In cooperation with the Department of Agriculture arrangements were made to plant some seed at two of the Departmental experiment farms. This work is being done without the advice of a soils specialist. Soils vary much, and water used for irrigation in this country varies considerably in its adaptation to crop requirements. Thus far, soybean, peanut, sorghum and cantaloup seed have been planted. This work is under the supervision of Thomas J. Moon. Oxen power was applied to the small turning plow provided by TCA in preparing the sud-bed.

The Deputy Finance Minister called a meeting in his office to discuss projects in the Tihama of Asir. In addition to the Deputy Minister, the following attended: Mr. Dunaway, Acting Director of TC in Saudi Arabia, Shaikh Ahmed Obaid, Director General of Agriculture, Fred Johnson, Chief of the FAO Mission, Sadek Hussein, SAG-TCA Liaison Officer, and myself. This meeting was primarily to request TCA to accept responsibility for additional projects in connection with the agricultural project being undertaken by FAO in Wadi Gizan.

Attention is being given to drafting a type project agreement to be used in the various rural areas where agricultural improvement programs will be initiated. On account of the present personnel recruitment situation, it is not advisable to push for agreements since the Saudis are now discontented about our slowness to activate programs of work.

Agreements and Requests. None.

Program Information

Reports have been made to the Country Director concerning conferences and sundry trips during the month.

Technical Cooperation Programs Other than Point 4

The status of FAO's program is comparable to that of one month ago.

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TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

RESTRICTEDMEMORANDUM

April 1, 1953

TO: John A. Dunaway, Acting U. S. Director of Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

RE: Monthly Activity Report - March, 1953

ContentCritique

The Agricultural program is in a critical condition. This is due to the lack of technical personnel which is necessary for the development of project agreements and their prosecution. The Agriculture Division does not have on hand one technical specialist in any of the basic fields of agriculture. Saudi Government officials are stating that Point 4 Agriculture appears to be merely something on paper. This situation can be corrected by initiating action programs with technicians available to man the work, provided there is not much further delay.

Operation Summarya. Progress

1. The El Darb Rural Community Development Project is practically at a standstill. There are no technicians on hand to begin work with the farmers, and the test wells thus far have not proven satisfactory. Additional exploratory drilling may correct this situation. Mr. Thomas J. Moon made a trip to El Darb for the purpose of selecting a site on which living quarters for technicians are to be constructed. Drilling at the first site did not produce desirable water. It will be necessary to select another site. While in the area Mr. Moon made notes on sizes of villages, size and types of farms, crops and livestock grown; methods of seeding, cultivation, harvesting, storage of crops, insect pests, flora of the area, and facilities for irrigation.

Three conferences were held with the Director General of Agriculture during the month. The first conference was pertaining to a project the Director General is suggesting for the Gizan Wadi area. His project plan apes the Gezira land development scheme in the Sudan. If

RESTRICTED

the Tihama had a large river that could be tapped for the necessary water, such a project modified to meet country conditions would have some merit. The second conference was for discussing the possibilities of bringing a date specialist to Saudi Arabia to identify the best varieties and give instruction concerning more desirable methods of taking offshoots and transplanting them. A request for the employment of this specialist to begin work at an early date has been forwarded to TCA/W. The third conference was for discussing the proposed budget of the Department of Agriculture for the next fiscal year. The Director General is asking for a very large increase in funds, which probably will not be granted.

A trip was made to Eastern Saudi Arabia to investigate the possibilities of housing personnel in the Al Hasa Province. Very few houses and apartments are available, and rentals are extremely high. These accommodations are available only in the Village of Dammam and it probably is not advisable to locate American technicians there. The matter was discussed with the U. S. Consul-General, Max Bishop, and both of us agreed that the most satisfactory solution would be to build living quarters on the Consulate Compound.

Several farms were visited in company with Mr. J. C. Hamilton, ARAMCO Agricultural Consultant. I learned that many wells for irrigation purposes are being drilled in the Al Hasa Province and in the general vicinity of Riyadh. However, farmers are following ancient methods of applying water to the soil. A project for the demonstration of land leveling would be very appropriate. When appropriate personnel arrives, consideration will be given to a land leveling project in this area. My report on trip to Dhahran of March 14 gives other observations and recommendations.

Program Development

The Agricultural Experiment Station at Hadda Sham was visited to determine whether it could be considered for experimental and demonstration work. It will be necessary to await soil and water analyses before further consideration.

A trip was made to Wadis Khulais and Us Fan in company with Dr. Glen Brown, Chief of Natural Resources Division, Mr. Browne Majors, drilling superintendent, and Mr. Thomas J. Moon. The purpose of the trip was to select a drilling site in the vicinity of land suited to crop production. Car trouble prevented inspection of the areas. The second trip was attempted March 26th, but a dust and sand storm caused us to turn back. The crops, soils and irrigation engineer specialists are badly needed for determinations of this kind.

Agreements & Requests (None)

Program Information

More than a dozen photo negatives showing agricultural scenes in Al Hasa, Asir Tihama and Hejaz areas were supplied to our Program Director.

Technical Cooperation Programs other than Point 4

When first coming to Saudi Arabia last fall (1952), FAO's plan for Saudi Arabia as presented to me in Rome was that it would begin an agricultural program in Wadi Gizan. For the first year or 18 months, this program would be concerned with the establishment of an educational institution, an experiment station and a detailed soil survey of Wadi Gizan. Extension work was to then follow.

The FAO Mission here apparently has had difficulty in obtaining financial support from the SAG to initiate its program. Work was to have started in Wadi Gizan last fall (1952). As yet no personnel has been stationed there. Recently FAO added an extension specialist to its staff.

TCA's planned approach to improve agriculture in Saudi Arabia was set forth in my Monthly Activity Report for February 1953. The plan, of course, had been developed much earlier. The Director of the FAO Mission and I have discussed FAO's and TCA's proposed initial approaches to the common agricultural objective in Saudi Arabia at various times since November 1952. It is now my opinion that if FAO does not obtain government funds to build a dam in Wadi Gizan and establish an experiment station and agricultural school in that area, its efforts will be directed toward a type of program now planned by TCA. FAO has considerable personnel and several surveys have been made during the past two years, all of which bear upon development in the Tihama with the exception of the survey on dates. The TCA Division of Agriculture does not have one agricultural specialist in any of the basic fields of agriculture at this time so that projects can be developed and community or area programs initiated.

Establishing an initial program of agricultural improvement, and getting it under way is of some significance to TCA when it is one of two agencies attempting to start individual programs of work at the same time, in the same country and with the same ultimate objective. At present the mutual relationships of personnel of the two agencies are excellent, and there is an expressed interest by both to prevent overlapping of functions and to cooperate in every way possible.

WJEdens:o

JADunaway

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

February 24, 1953.

MEMORANDUM

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Dr. W. J. Edens, Chief, Agriculture Division

RE: Monthly Activity Report - February, 1953.

During this month, much time has been given to communication with the Saudi Arabian Department of Agriculture concerning its own proposed plans for improving agriculture in the Kingdom, and the general plan of Point 4 Agriculture Division for accomplishing the same objective. Shaikh Ahmed Obaid, Director of Agriculture, agrees that a real improvement program in agriculture must begin with the farmers, but he places much emphasis on establishing large units of heavy earth-moving equipment and farm power implements that would be available to all farmers. This, of course, would be in a setting where the farmer now plows principally with a stick, uses very primitive hoes, and conducts most of his farming in relatively small fields with high wind-breaking dikes around the most of them.

Early in the month the Director of Agriculture requested that I submit in writing the plan Point 4 expects to follow in improving agricultural standards in Saudi Arabia. The following general plan was forwarded to him in the Finance Minister's office:

- a. In cooperation with the Saudi Arabian Government, select rural communities, or areas, in which to initiate programs of agricultural improvement.
- b. Station Point 4 agricultural technicians and their Saudi Arabian counterparts in areas selected for agricultural improvement. Their objective will be to advise with and teach present and prospective farmers improved farming methods, thereby increasing production and raising the standard of living. Point 4 technicians will supervise and be responsible for all work undertaken, but will be assisted by their Saudi Arabian counterparts.

c. In addition

(copies given: TCA/W; Dr. Edens; OFAR; Mr. Betzig; Chron; file 1 and file 2)

c. In addition to technicians stationed in the various areas, Point 4 proposes to recruit a staff of specialists in the fields of agronomy (crops), animal husbandry, soils, entomology, horticulture and farm irrigation. These specialists will be responsible for providing guidance and assistance in each area program by being responsible for planning and supervising needed research, demonstrations, and other specific action programs for the purpose of improving farm practices pertaining to crops, livestock, insect pests and diseases, irrigation and land development. The Saudi Arabian Government will be expected to furnish counterparts to work with the specialists so that later they will be able to conduct such work without the aid of Point 4 technicians. The work of all specialists will be in cooperation with the technicians stationed in the areas.

d. An experimental and demonstration plot of land will be established in appropriate areas where a modest program of experimentation will be conducted to determine the more desirable types and varieties of crops for farmers in the respective areas. Also this plot of land will be used for appropriate agricultural demonstrations. The local or central Government will be expected to provide the small acreage of land required for such plots.

e. Since agricultural improvement programs will be a joint and cooperative effort by the SAG and Point 4, equipment and materials necessary to the effectiveness of Point 4 technicians' work in the various areas will be supplied by the Saudi Arabian Government and Point 4 according to provisions of project agreements, which will be effected to meet the needs of designated communities, areas, or specific action programs.

f. In addition to this community, or area, approach to the improvement of agriculture in Saudi Arabia, it is the purpose of Point 4

(1) To foster the improvement of Governmental services to agricultural producers by assisting in the development of a strong Department of Agriculture which will place increased emphasis on agricultural research and extension work.

(2) To develop

- (2) To develop greater confidence on the part of farmers of Saudi Arabia in the services which their Government will provide.
- (3) Furnish technical assistance to the Government in establishing on-the-job training for farmers in major farm enterprises, and in organizing elementary agriculture instruction.
- (b) To encourage the development of new farm lands where sufficient water is available, and where such development appears economically feasible.
- (5) To provide technical assistance to the Government in the development of a farm marketing program.

Later when discussing the above plan with Shaikh Obaid, he stated that he concurred in it from A to Z. That, of course, the future will determine.

Recently, another meeting was held with the Director of Agriculture. At that time he wanted to know approximately the amount of funds he should allot in his next fiscal budget for cooperation with Point 4. This was the first concrete step taken to recognize the TCA program. Following this meeting, a letter was forwarded to the Finance Minister, Shaikh Abdullah Sulaiman, which set forth estimated budgetary items on a single community basis pertaining to (1) land for experimental and demonstration plot, (2) importation of improved livestock, poultry, plants and seeds, (3) materials and labor for repairing and building irrigation dikes, digging diversion ditches, repairing and constructing small earthen dams, and leveling land for better irrigation practices (4) community farm workshop, (5) equipment and materials for demonstrating the control of insect pests and plant diseases, (6) equipment shed and storage rooms, (7) petroleum products for travel vehicles, and (8) Saudi agricultural counterparts and their maintenance. This letter is now being translated for transmittal.

The Natural Resources Division is now drilling a well near El Darb where housing will be constructed for TCA technicians. The structure will conform largely to native design and will be constructed of native materials. Mr. Moon accompanied the drillers to El Darb for the purpose of selecting the camp site. It is my recommendation that the exploratory wells for irrigation water be drilled and proven before actual construction of lodging quarters is started.

The lack

The lack of agricultural technicians for initiating agricultural improvement work is of greatest concern at present. When arriving in Jidda last fall, I was confident that specialists in the major agriculture fields would be on the job by the first of this year. At present none of these men are here. The Saudis have been raising the question concerning when work will actually get underway ever since my arrival. I now find that I cannot answer their queries as well as I could last fall. In fact, the matter is becoming somewhat embarrassing. Furthermore, the best working half of the year is slipping away and the hot summer will soon arrive.

Despite the approaching hot season, it is hoped that technicians will soon be arriving, and that they will be relatively mature men of successful experience and well grounded in their chosen specialties.

During the month time has been given to program phasing for improving agriculture in El Darb area. This includes (1) types of improvement relative to extension services in crops, livestock, poultry, land reclamation and use, vocational instruction in agriculture for adults and young people; (2) personnel requirements - TCA and Saudi; (3) travel equipment; (4) housing, and (5) estimated equipment and supplies for the first year.

A three-day trip has been made in the vicinity of Jidda to observe farming conditions and practices during the winter months.

To date, it has been necessary for the Chief of the Agriculture Division to write in longhand all memoranda, letters, program outlines, reports of all kinds, and submit the same to pooled typists. It is hoped that this kind of drudgery will soon be terminated by the provision of secretarial assistance.

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia
January 26, 1953

MEMORANDUM TO: John A. Dunaway
Acting U. S. Director of Technical
Cooperation in Saudi Arabia

FROM: William J. Edens, Chief *WJE*
Agriculture Division

RE: Activities for January, 1953

Having made a general survey of farming conditions in the Asir, with special emphasis on the El Darb area, attention has been given to plans for developing an agricultural improvement program at El Darb.

As pointed out previously, El Darb is approximately 400 miles from Jidda and can be reached only by traveling a very difficult road. Three days are required to make the trip one way. A minimum of two vehicles (4-wheel drive) for safety purposes is required, and drums of gasoline must be taken along in addition to camping equipment, food, tools and spare parts for the vehicles.

Since El Darb is a primitive village, there are no living quarters available or suitable for technicians. Thus housing is one first major problem. Plans have been drafted for the erection of a simple structure conforming to native architecture, the same to be built as much as possible out of native materials. A building site will be selected between the village of El Darb and open land to the northwest which is being considered for agricultural development. Monthly reports for November and December of 1952 give detailed information concerning the El Darb area.

A well is to be drilled in the near future at the camp site where living quarters are to be constructed. Mr. Thomas J. Moon, his interpreter, a driver, a cook and a guard are now enroute to El Darb to select the camp site. This trip required two Dodge power wagons, and considerable equipment. Technicians cannot depend on local living accommodations in any of the farming areas in this country. The camp site and well are to be so located that the well can be used to irrigate an experimental and demonstration plot of land.

Considerable thought has been given to getting the trail, or road, from Jidda to Gizan improved. This would greatly stimulate the reclamation of land in the Tihama Area of the Asir. At present the transportation of produce from that area to the populated centers of Jidda, Mecca and Medina is almost impossible.

During the month two meetings have been held with the Director General of Agriculture. On these occasions discussions centered around his suggested agricultural units (equipment and personnel) to be established in various farming areas for the purpose of assisting farmers, and the general plan of

procedure/

procedure Point 4 expects to follow in developing agricultural improvement programs. These meetings have been profitable in providing a common basis of understanding relative to the approaches to agricultural problems in Saudi Arabia. The bottleneck to initiating an aggressive program by the Agriculture Division is the lack of housing and personnel.

A report on the Asir trip has been completed and submitted to the Country Director.

Mr. John M. Amos, Entomologist, arrived January 15. However, due to illness, it became necessary for him to enter the hospital at the Dhahran Air Force Base Hospital. Plans at present are for Mr. Amos to return to the United States.

December 29, 1952

MEMORANDUM TO: Mr. John Dunaway
Acting U. S. Director

FROM: W. J. Edens
Chief, Agriculture Division

RE: Monthly Reports - November and December - 1952.

During the past two months, trips have been made to additional areas of Saudi Arabia to further familiarize the writer with agricultural conditions and needs. Also, contacts have been made in and out of government circles pertaining to agricultural problems.

The first area visited during this report period was Wadi Hudda, northeast of Jidda. Water in this wadi is supplied by both soils and dabbils. A number of farms were visited. Crops growing were dates, cucumbers, a few bananas on one farm, melons, sweet potatoes, okra, beans, corn, sorghum and millet. One farm is attempting to grow a few grapefruit and oranges. Homes of Hudda Village were constructed principally of mud-brick and palm leaves. There were several stores of the most primitive type. The village has a school that teaches reading, writing and the Koran.

The Government Farm, located about two miles up the wadi from the village, is operated by a Prince, according to farm attendants. He was away, but in being conducted about the farm, the irrigation system was noted. Water came from a dabble and some from wadi soils - crops consisted of sweet potatoes, cucumbers, okra, beans, cotton, corn, radishes, tomato plants, cabbage plants, Bermuda grass and a small amount of alfalfa. Some young dates had been set. A short distance down the wadi from the village water was standing in low places. The government farm might be suitable for a demonstration farm for the entire Jidda area.

Wadi Khulais was visited and it is located about 80 kilometers northeast of Jidda. It is reached by traveling the SAM road beyond village Usfan and then taking the left fork. Several farms are located in this wadi. However, the largest one is owned by Sheikh Ahmed Fakhri, Director, Bureau of Mines and Foreign Companies. Sheikh Fakhri was interpreter to the U. S. Agricultural Mission of 1942. This farm had an excellent crop of sorghum. Other crops growing were grapes, oranges, bananas (not doing well) sweet potatoes and some cotton plants for home use. The grapes and oranges had not been set very long.

This farm has 4 wells with water standing within 25 feet of the surface. It also has diversion dams to make use of wadi soils. Water pumps were running at two of the wells with a 4 inch delivery. The soil appeared to be deep and fertile. The wadi area to the south spreads out to a flat valley bottom and appears to be suitable for farming should water be provided. More time should be spent looking over this area before appraising it for reclamation. The village was very small.

November 1, our offices were moved to the new office building constructed by the SAG in Baker Compound. Household furniture arrived from the States and Mrs. Edens arrived November 3.

Plans were made with the Natural Resources Division to make a trip to Wadi Itwad and Abha in the Asir - Wadi Itwad had been selected by the Country Director of TCA and the Saudi Deputy Finance Minister to be one of the two wadis where the million dollar package program would be developed. Dr. Glenn Brown had assured the two that there was adequate underground water that could be used for irrigation purposes to develop a large tract of land northwest of El Darb, a village located on Wadi Itwad. It was the opinion of the Chief of the Agriculture Division, that a visit should be made by agricultural personnel to this proposed farm development site before incorporating the same in a Project Agreement. This was not done. Many factors are involved in a program of land reclamation anywhere and at anytime.

A detailed report is being prepared on the trip to the Asir. However, the remaining part of this report gives briefly a description of El Darb and Abha areas.

El Darb

El Darb is a village of approximately 200 houses, and a population of 1600. It is located some 20 kilometers inland from the Red Sea on the south bank of Wadi Itwad. Three villages are located up the wadi from El Darb, and ten villages are found between El Darb and the Red Sea. These villages have an average population of 160 each according to the estimate of the El Darb Amir. The homes are constructed of mud or mud and stick walls with thatch roofs, and the mode of living is very primitive. The basic bread crop is Durra and meat is supplied principally by sheep and goats. A few vegetables are grown when there is sufficient rainfall. The annual rainfall is estimated to be 8 to 10 inches. Rain gauges have not been installed.

The community of El Darb appears to have adequate farm lands which are diked to receive water from wadi soils. When rainfall is distributed fairly well throughout the rainy season, better use is made of water coming down the wadi. Otherwise diversion dams are washed out and little water is received by the fields which are ready at all times to receive water from the soils. Fields in the El Darb community will exceed 1000 acres.

About 10 kilometers northwest of El Darb is found a large tract of land that appears to be well suited to the production of crops should water be provided for irrigation. The soil is a silt loam and of fair fertility. It lies well and the cost of land leveling should be at a minimum. Water resources surveys made by the Natural Resources Division indicate that there is sufficient water stored beneath the surface to make the irrigation of much of this land feasible. Test wells are to be drilled by the Natural Resources Division at an early date to determine the amount of water that can be made available.

In the development of a community improvement program in the El Darb area, it should be pointed out that this area is in a remote section of the country and is reached from Jidda by a three day journey over a trail which is rough and rocky almost beyond description in many places. Some are practically impossible. It will be necessary to provide housing accommodations for technicians which should be air conditioned during the severe hot season of several months. Some kind of medical assistance should be provided in case of emergencies and radio communication facilities will be essential. Personnel for work in this area should be unmarried or men who are willing to be away from their families for long period of time, and who are willing to live under rugged conditions. Food and water supplies will be problems. The above items are mentioned because they must be dealt with in any program in the Tihama of Asir.

Upon returning to Jidda, plans were made to begin writing the Long-Term Functional Plan in Agriculture for Saudi Arabia.

ABHA

Abha is the capital of Asir and it is centrally located in that province. Its population is approximately 3000. Community organization is quite evident by the existing service institutions. Homes of the people are very substantial with architectural design complimentary to any city.

Farms in the Abha community and those of adjoining wadis and villages are carefully terraced to make use of all available water and to conserve the soil. Farm houses of durable construction and they possess the same architectural design found in Abha. Crops grown include wheat, barley, alfalfa, durra, onions, eggplant, peppers, pumpkins, tomatoes, pears, apples, grapes, young citrus, plums, peaches, mulberries, olives, figs and pumgranate. Some of these are of little consequence. The common crop rotation is to follow wheat and barley with vegetables. All barn-yard manure is conserved and placed on the fields. It is the only fertilizer used.

It is believed that Abha would readily respond to a community improvement program. Definite efforts are now being made to improve health, education, and agriculture. Consequently Abha, with technical assistance, could become a model for community improvement throughout the country.

It is suggested that serious consideration be given to helping constructing a dam in Wadi Abha near the old dam site. This additional water supply would greatly increase agricultural production in the entire wadi. All desirable land has been brought under cultivation. However, its productivity is limited by inadequate water supply and cultural practices.

Agriculture

El-Hasa
Hofuf
Al Bahay Farms.
Asir

Reports
Memos.
by
TCA Staff
Armedo
Published articles

See also Oct 23rd
Report by Edens on his
studies enroute to Jeddah
from Washington.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 19, 1953

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: Thomas J. Moon, Ext. Specialist Irrigation Farming

SUBJECT: Visits to Farms and Gardens in Riyadh and Vicinity as Guest
of The Minister of Finance for 10 Days.

I met Mr. Abed El Azziz Ben Muamar, the Government representative at Riyadh for Baker. Mr. Abed El Razzak El Haj, the manager of the new modern farm owned by The Minister of Finance, accompanied me daily. We visited the Modern Farm six times for inspection of wells, soil, and buildings under construction. Several Caterpillar tractors with carryalls were busy hauling in soil and leveling the roads. Mr. George Wilson informed me that four wells were on the Farm and three with pumps installed would produce 200 gallons of water per minute. The fourth well had not been tested as to capacity. A modern 40 cow dairy barn is under construction and two 100-meter poultry houses which will house 10,000 laying hens.

I suggested that all four wells be piped into a main reservoir for irrigation. I also suggested that only 10 cows be purchased as the lack of water could not supply the pasture necessary. I also suggested that only 10 acres be irrigated from the wells, including the Palace gardens, vegetables, poultry and dairy projects.

The soil was found to be Class II, approximately 1/3d limestone and one-half fine sand, the remainder silty clay with practically no humus with very little nitrogen. Without analyzing the soil chemically I am sure the P.H. will be 8.0 or above, therefore indicating fairly good for vegetables.

At the suggestion of the Minister of Finance I visited Al Kharj Farms, 3 in number, varying from 620 to 1250 acres in size with ample water for irrigation in season for the two larger units. The smallest farm was waterlogged and high in salt, seeded mostly to dates and alfalfa, and had been cultivated many years. Modern farm machinery is used on all three farms with excessive use of hand labor, especially in cutting alfalfa green for loading 75 trucks daily and hauled 75 kilometers to the King's Palace.

The main crops grown are alfalfa, oats, wheat, watermelons, tomatoes, carrots, sweet and hot peppers, eggplant, cantaloupes, onions, cabbage,

cucumbers, Sudan grass and Rhodes grass. Considerable athel is grown for wind breaks and wood. The oats were averaging 40 bushels per acre; the green alfalfa about 5½ tons per acre, Cut 10 to 12 times annually. About 200 to 300 pounds of superphosphate and from 300 to 600 pounds of 20% nitrogen (ammonium sulphate) per acre is applied at 3 or 4 applications during the growing season.

Mr. Frank Brookshier, Manager of Al Kharj Farms, drove me over the farms and I observed the poultry farm from incubation to laying hens. Ducks and turkeys are also being produced. Some 8,000 chickens were on hand including baby chicks, broilers, fryers and laying hens.

The dairy herd consisted of Jerseys and Brown Swiss, with 30 cows milked daily by milking machines producing approximately 850 pounds of milk daily. Modern sterilizing and bottling equipment was used. The beef cattle consisted of 400 head of native cattle (Zebu type) and 7 head of registered Santa Gertrudes.

Over 200 head of mares and horses were being kept on the 1280 acre farm, mostly too old for service and merely being kept in retirement.

Some 75 camels were grazing with 150 sheep on the oat stubble.

I visited 5 wells being drilled under the supervision of Mr. George Grable of ARAMCO with all Arabic crews. These were being drilled to supplement other water wells in use on 5 to 20 acre vegetable gardens. In some of these gardens were growing dates and alfalfa; in others, cucumbers and cantaloupes, and just finishing harvesting tomatoes.

I had two conferences with the Minister of Finance and he expressed a desire for me to aid in selecting seeds and tools for his garden and to advise with his manager on the new Modern Farm only 5 kilometers from Riyadh (Baker Compound).

TJMoon:o



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 28, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

RE: Items to discuss with Mr. Hamilton should he come to Jidda
before I return

Land Leveling

1. Kind and amount of equipment for one land leveling team.
Estimate of cost.
2. Kind and number of personnel required to constitute a land
leveling team.
3. What preliminary work (surveying, etc.) to land leveling will
be required?
 - Equipment
 - Kind and number of personnel required
4. Servicing the land leveling team
 - Housing and Food
 - Transportation
 - Gas, oil, repairs
5. Areas in which to work?
Qatif, Dammam, Hofuf, Riyadh, etc.
6. Amount of leveling to do in each area that would be considered
sufficient for adequate demonstration
 - Number of farms
 - Acres in total.
7. Time of year suited to land leveling.
8. Other.

TIDAL GATES

1. Number of tidal gates necessary for adequate demonstration.
2. Best locations.
3. Construction of gate
 - Who?
 - Where?
 - Materials required - where obtained?
 - Approximate cost
4. Amount of ditching for each gate.
5. Installation of Gate
 - Materials required
 - Personnel needed
 - Approximate cost.
6. Other.

WJEdens:o

Agri

MEMORANDUM

April 27, 1953

TO: Mr. John A. Dunaway
Acting U. S. Director
TCA, Jidda

FROM: Sadek Husseini *SH*
Director, Liaison Office
for Technical Assistance

RE: Agricultural Demonstration Farm in Riyadh

In our meeting with H.E. the Minister of Finance at Riyadh, he expressed his wish that Point Four agriculturist will assist in the lay out of the above mentioned farm.

The land is now being levelled and needs demarcation and parceling and laying out of the irrigation system. Farmers in the Riyadh vicinity may also need some advice on their agricultural methods.

Therefore, I should be glad if Mr. Moon is detailed for this work. It may take him something like ten days. I shall make all necessary arrangements for his trip to Riyadh and return.

Thank you.

*Give copy to E. R. ...
Authorized to send Mr. ...
Moon
JAH
4/27/53*

Agri

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda, Saudi Arabia

April 21, 1953

Mr. J. G. Hamilton
Agricultural Consultant
Arabian American Oil Company
Dhahran, Saudi Arabia

Dear Guy:

It appears necessary for me to postpone my visit with you until a later date. Since communicating with you last, our Country Director has been notified that our budget another year will be drastically revised. Therefore, the opinion is that I should not attempt to establish a team and equipment for land leveling until budgetary matters are further clarified. It is unfortunate we are thus delayed.

We are pushing the recruitment of Mr. Nixon. I hope he will accept the assignment, and that he can be despatched out here by June 1. Mr. Carlson is in the States now and will lend his assistance in getting Nixon to come.

The first opportunity you have, come over and visit with us. At least we can talk.

Sincerely yours,

W. J. Edens
Chief, Agriculture Division

WJEdens/1
JADunaway



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

MEMORANDUM

April 13, 1953

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division *WJE*

RE: Housing in Al Hasa for Agricultural Technicians

This has further reference to my memorandum of April 9, 1953.

Until the country agricultural program is firmed up, it might be more advisable to think of using house trailers for housing technicians in all areas. During this period families of all agricultural technicians would be housed in Jidda. If technicians are without families, so much the better.

Should this alternative be selected, I suggest that TCA purchase four trailers at an early date, two for use in the West and two in the East. These trailers should accommodate a minimum of three persons each, and be equipped with AC units, field-type refrigerators and tarpaulins.

I should be glad to discuss this matter with you.



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

Agri
x
Housing

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 9, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agricultural Division *WJE*

SUBJECT: Housing in Al Hasa for Agricultural Technicians

I think it is important that some action be taken toward providing living quarters for prospective agricultural technicians in Al Hasa. The report on my trip to Dhahran, dated March 14, 1953, reviewed my investigation and made recommendations relative to providing this housing on the Consulate Compound.

Eventually technicians will be dispatched here. Mr. Max Bishop, U.S. Consul General, stands ready to contact building contractors and to expedite construction. It will take several months to build living quarters, and I suggest again that steps be taken to provide necessary housing in the Al Hasa Province.

WJEdens:o

agri

TECHNICAL COOPERATION ADMINISTRATION
American Embassy
Jidda

April 1, 1953.

Mr. J. G. Hamilton
Agricultural Consultant
Arabian American Oil Company
Dhahran, Saudi Arabia

Dear Guy:

I have been giving some thought to the land leveling work we discussed when in Dhahran last. Mr. Dunaway is favorable to exploring more so a project of this type relative to extent and justification.

In giving further consideration to the matter, I think it would be advisable for me to return to Dhahran and visit some of the farms in Al Hasa where wells have been brought in, and where the old methods of leveling are being continued. And since TCA is handicapped by the lack of transportation facilities and interpreters in the East, except what could be furnished by the Consulate, it may be necessary for you to assist me in these matters. Be assured, however, that TCA will pay expenses entailed.

If it will be convenient for me to come over for a few days in the immediate future, I should be glad if you will write accordingly or send word through Jim Knight.

Sincerely,

W. J. Edens
Chief, Agriculture Division

cc: Dr. Edens
Chron
File 1 and File 2

OK per JAD

March 16, 1953

In reply refer to:
Technical Cooperation
Administration,
American Embassy,
Jidda, Saudi Arabia.

Mr. W. E. Palmer,
Public Relations Department,
ARAMCO,
Dhahran, Saudi Arabia.

Dear Bill:

Just a word to tell you how much I enjoyed my visit last week. I think it will prove to be of benefit as our program develops.

The many courtesies extended to me were appreciated, and especially the opportunity to visit with Mr. Hamilton and see some of the work he is doing. When you come this way, stop in and see us.

Sincerely yours,

William J. Edens, Chief,
Agriculture Division.

JED
J. Dunaway
TCA:WJEdens:pm

Agri - Date Specialist

f-1

~~2-2~~
chron
1-Edens

March 16, 1953

In reply refer to:
Technical Cooperation
Administration,
American Embassy,
Jidda, Saudi Arabia.

Mr. J. G. Hamilton,
Agricultural Consultant,
ARAMCO,
Dhahran, Saudi Arabia.

Dear Guy:

Just a line to let you know the trip back to Jidda was okay, and to again tell you how much I enjoyed my visit with you. The privilege of staying at Steiniki Hall was appreciated.

Director Dunaway approved obtaining a date specialist, and a telegram has gone forward requesting that Mr. Nixon be contacted. I requested that he be spot checked and dispatched so that he would arrive by June first. We certainly hope Mr. Nixon will accept the invitation.

Mr. Bolster is being requested to get in touch with Messrs. Case and LeVee.

The first opportunity you have, come over, and be sure to bring Mrs. Hamilton. Mrs. Edens joins with me in extending an invitation for you to stay with us.

Sincerely yours,

William J. Edens, Chief,
Agriculture Division.

cc : TCA/W

JADunaway
TCA:WJEdens:pm

f-1 (orig)
f-2
X chron
L Edens
1-TCA/W

Jidda, Saudi Arabia

March 14, 1953

RESTRICTED

In reply refer to:

TCA

Report on Trip to Dhahran, March 4 to 10, 1953, by William J. Edens,
Chief, Agriculture Division

March 4

The entire day was spent enroute to Dhahran.

March 5

Visited with U.S. Consul-General, Max Bishop. We discussed the present situation of Point 4 Agriculture Program and need to get something going. Arrangements were made for me to visit H.H. Amir Saud Ibn Abdullah Ibn Jilurvi of the Al Hasa Province and H.E. Shaikh Abdullah Ibn Adwan, Assistant Deputy Finance Minister for the Eastern Province. The visits were set up for the 7th since the following day was Friday.

March 6

Visited with Mr. J. C. Hamilton, Agricultural Consultant for Aramco, and Frank Brookshire, Manager of the Al Kharj Farms.

March 7

Visited with H.H. Amir Ibn Jalurvi and H.E. Shaikh Adwan. Amir Ibn Jalurvi had been moved by the Crown Prince from Hofuf to Dammam. He was interested in agricultural matters as usual, but wanted to know when some work was to be started. He is interested in a project of tree planting in Al Hasa to provide lumber and other building materials. He wants Point 4 to find trees suited to the area and obtain the seed.

Shaikh Adwan was pleasant but rather critical of Point 4. Agriculture seems to be the phase of TCA in which there is most interest. He stated that he had had high hopes of what Point 4 would accomplish in agriculture, but that he had been quite disappointed. Said that Point 4 seems to be just something on paper. Shaikh Adwan asked me when would the "experts" arrive. He further stated that his hopes for Point 4 assistance had been 100% but now they were 50%, or below. He admitted that the Saudi Government had caused some delay. None of them seem to understand why we do not have personnel ready for work. I learned that the

Finance Minister has been critical of Point 4's slowness in getting agricultural work going. This, of course, is hearsay. Many feel confident that Shaikh Adwan will be the Finance Minister when the King passes.

In the afternoon I visited with Mr. W.E. Palmer of Public Relations. He has shown quite a bit of interest in getting a program under way. Mr. Hamilton and I drove out to see some land north of Dammam which is being considered for reclaiming by a local committee appointed by the Crown Prince.

March 8

Most of the day was spent in company with Mr. Hamilton, visiting the Qatif farming area. Also we went into the Qatif Suq and interviewed wool merchants. We learned that 25 to 75 sheep are sold each day for slaughter. The wool is not clipped but pulled from the sheep's skin after it has been removed in the slaughtering process.

The merchant stated that more wool was obtained that way than by clipping. I estimated the weight of wool from several sheep to be about 3 to 4 pounds. Some of the sheep sold came from Iraq.

March 9

Visited research center and Aremeo library in the forenoon. Practically no materials on agriculture.

In the afternoon Mr. Hamilton and I visited several farms near Kobar, including one owned by Shaikh Adwan. We also looked over some land that can be leveled with machinery and brought under irrigation with artesian wells. On our way back we visited with Consul-General Max Bishop. He is interested in Point 4 getting farmers in the Hofuf area to use surplus water during the winter months to grow wheat. He claims that more than a thousand acres can be planted.

March 10

Returned to Jidda.

Housing

Mr. Bishop stated that houses can be built on the Consulate compound. Utilities and space are available. He advises against placing families in Dammam or Khobar. Upon investigation I found that a three-bedroom house, or apartment, can be leased furnished in Dammam for 2,000 riyals per month or for 1500 unfurnished. The Consulate interpreter obtained this information for me.

Mr. Bishop stated that they could provide space for a single person most of the year on the compound. Mr. Hamilton thinks he can arrange for one person in his home and elsewhere. Mr. Bishop is ready to talk to contractors relative to building on the compound. He has no funds for building, so TCA and the State Department would have to make decisions here.

Other Observations

I learned that HRH, Crown Prince Saud Ibn Aziz, has embarked upon a comprehensive reform program for the Kingdom of Saudi Arabia; to carry out such a program the Crown Prince is visiting province officials and making personal surveys in the various provinces to determine needed reforms.

Recently he visited the Al Hasa Province for several weeks and established a 16-point reform program. Some phases or points of this are as follows:

1. Increase in number and salaries of members for the Committee of Public Morality.
2. Provincial Amirate moved to Dammam (H.H. Amir Saud Ibn Jilurvi has already moved from Hofuf to Dammam). Additional Amirates are being assigned to certain districts or villages for better government.
3. Establishment of an Administrative Council for the Eastern Province. H.H. Amir Saud Ibn Jilurvi will preside over this council.
4. Building and repairing of mosques.
5. Shariah Courts are to be established in additional places.
6. New labor and workmen's regulations.
7. Agricultural aid. The sum of SR 2,000,000 has been ordered to provide for loans to deserving farmers in the Hofuf Oasis, and SR 500,000 to provide for the same purpose in the district of Qatif.

- The Crown Prince has ordered the Minister of Finance to pay for improvement of all canals irrigating government lands. Three agricultural experts are to be appointed for Hofuf and two for Qatif. They are to advise farmers in the best technical agricultural methods.
8. The Public Security Department of the Province has been ordered reorganized.
 9. The Crown Prince has ordered a reorganization of educational affairs and has appointed a Deputy Director of Education to supervise all matters pertaining to schools: instructions, culture and inspection. He has ordered the primary school at Dammam to be raised to secondary level, and the construction of a new primary school. Boarding facilities are being provided for students. A committee appointed by the Crown Prince has recommended the establishment of a large trade school to be located in the Dammam area.
 10. A Deputy Director of Health has been ordered appointed to supervise health affairs of the province. Hospitals are to be erected at Dammam, Al Khobar, Qatif, Hofuf and Jubail.
 11. A Syrian expert on municipalities has been assigned to visit Al Hasa and recommend ways and means of effecting better municipal organization.
 12. A Chamber of Commerce is to be established in the Province.
 13. Certain roads have been ordered paved and others improved.

Other minor reforms have been ordered by the Crown Prince.

Conclusion and Recommendations

I think it should be recognized that the extreme Eastern Province of Saudi Arabia is emerging from a primitive mode of living more quickly than in other provinces of the Kingdom. This, of course, is due to the influence Aramco is having on the entire area. Employees come in large numbers from villages and communities throughout the Province. They are subjected to a modern industrial environment where they are required to pursue certain education courses to better fit them for employment. This experience is being carried back to the homes throughout the East. Men a few years ago who possessed much leadership and ability among their people now possess greater ability and leadership because of their new experiences with a giant industry that has developed in their midst. Naturally their wants have increased and their demands are greater. Such a condition in the Eastern Province contrasts sharply with conditions in the Tihama of

southwestern Saudi Arabia where economic and social conditions are very much as they were centuries ago, except for a very limited amount of motor transportation, and where there is no large industrial development to stir their imagination.

It is my opinion that TCA should give more attention to the Eastern Province. A little attention in the East would probably be more appreciated than in the West by those in leadership positions. This, of course, is open to debate.

In consideration of the entire above report, I suggest the following:

1. Recruit a date specialist to determine the few best varieties of dates in the Al Hasa province, and give instruction in the best propagation practices.
2. When adequate personnel is available, give attention to demonstrating land leveling to individual farmers in Eastern Saudi Arabia. Many are drilling wells, but using the ancient ways of irrigating. We probably would want to provide a set of equipment for demonstrating such land leveling. Some government or local assistance may be obtained.
3. Make soil survey as soon as possible in the Qatif, Dammam and Hofuf areas to determine ways and means of better drainage, and more efficient use of water now available. This work will also require services of an irrigation engineer.
4. Station general agriculturists at Hofuf and Qatif as soon as they can be employed. The specialists should be on hand when this is done, but I believe Mr. Hamilton of Aramco would lend an advisory hand until the specialists arrive.
5. Make plans for technician vehicles to be used in East.
6. Make plans to provide housing on Consulate compound to accommodate at least two families and three single men. Mr. Bishop said that he could have building erected.
7. Station part of specialists in Dhahran area.
8. Send Dr. Dolley and Mr. Ferguson to Al Hasa to look over activities in their respective fields.

Jidda, Saudi Arabia

MEMORANDUM

February 28, 1953

TO: Sadek Bey Hussein
Chief, Liaison Office
for Technical Assistance

FROM: John A. Stacy *JAS*
Acting Executive Officer

RE: Transportation for Dr. William J. Edens

Will you please arrange transportation, via Saudi Airlines, for Dr. Edens from Jidda to Dhahran, leaving Monday, March 2, and remaining in Dhahran for several days to return about March 7.

Dr. Edens is travelling on official business in connection with the Saudi Arabian agricultural program.

JASTACY:dg
JADunaway

II. PROGRAM

*weekly Letter #4
2/28/53*

Mr. Hamilton: We received a telegram from the Consul General, Dhahran, stating that Mr. Hamilton, Agriculture Advisor of Aramco, was requesting I come to Dhahran for consultation on the agricultural situation in El Hasa. Since I cannot very well go at this time, it seems advisable for Dr. Edens to go over and consult with Mr. Hamilton and at the same time get information as a basis for selection of regional headquarters. Dr. Edens plans to start early next week. I believe our agricultural program should profit by the advice of Mr. Hamilton since he has exceptional knowledge and experience.

*Letters
3/7*

Agriculture: Dr. Edens left on March 4 for Dhahran for consultation with Mr. Hamilton and to look into the matter of locations for agriculture stations.

COPY

Congen Dhahran

February 25, 1953

PRIORITY

RESTRICTED SECURITY INFORMATION
From Abbey

TOTEC

Urtel 205. Dunaway unable visit Dhahran. Welcome Hamiltons advice
and suggestions on agriculture program and suggest Edens visit Dhahran for
this purpose early March.

HARE

JADunaway/1 2/25/53

RESTRICTED

SECURITY INFORMATION

From Dhahran, No. 205, dated Feb. 19, 1953

Guy Hamilton, Agricultural Advisor, Aramco, today told Congen Aramco has invited Dunaway to visit Dhahran to discuss TCA agricultural projects which might be approved before the end of this fiscal year. He is anxious that discussions start while MINFIN in Dhahran area and thinks he could persuade MINFIN to approve certain projects for Al Hasa. Also believes that projects could now gain form for submission of final approval well before end of fiscal year if act quickly. Dr. Hamilton recovering from heart attack and unable to travel for some time and therefore anxious that Dunaway come to Dhahran if ~~xxxxx~~ possible.

Congen believes growing importance of this area and warrants consideration of hamilton proposals which he previously discussed with Eaykins and Fryer.

BISHOP

*Agriculture*UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

February 10, 1953.

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Mr. Robert B. Kennedy

RE: Interest in the El Hasa area in Agriculture Assistance by TCA

During the course of my recent visits to the Hasa area, I found considerable interest expressed by local Saudi Arabs in the possibility of assistance by TCA in the agricultural field in El Hasa. Sheikh Abdullah Bin Adwan, the Ministry of Finance representative for El Hasa, asked me specifically what TCA planned for the Hasa area in the field of agriculture. Also, he asked if Dr. Edens or any of his men were planning to come to Hasa for the purpose of giving agricultural assistance.

I could not answer either of his questions, but advised him that I would pass on his sentiments to our people in Jidda. I did say, however, that TCA was interested in the entire country of Saudi Arabia, and I assured him that likely there were plans being developed for an agriculture program which would include the Hasa area.

He wished me to pass on his sentiments that TCA keep in mind the Hasa area and have some concrete program for its agricultural development. He expressed the wish that Dr. Edens or some of his associates again visit the area and make concrete proposals for an agricultural program there.

cc: EBetzig
WJEdens

Jidda, Saudi Arabia
January 8, 1953

Mr. Frank Brookshire, Manager
Al Kharj Farms
Saudi Arabia

Dear Mr. Brookshire:

Your letter of the 8th came while I was on a three-week visit to the Asir. I am glad to know of your visit with His Excellency Abdulla Sulaiman and that he is interested in agricultural problems of the country. It is encouraging to know of his interest in the much needed fence.

My trip to the Asir was interesting. There are many agricultural possibilities there if additional water can be supplies. That story, of course, is the same most everywhere.

Mrs. Edens and I appreciate very much the invitation to visit with you and Mrs. Brookshire. Should a trip be planned we certainly will want to visit with you. The same invitation is extended to you and Mrs. Brookshire whenever you can come our way.

Best wishes for the New Year.

Sincerely yours,

W. J. Edens
Chief, Agriculture Division

*Copy in Mr. Edens
Folder.*

Jidda, Saudi Arabia

September 11, 1952.

Dr. William J. Edens
Chief, Agriculture Field Party
Technical Cooperation Administration
Jidda, Saudi Arabia

(c/o Aramco, Dhahran)

Dear Dr. Edens:

Ed Betzig will tell you of the problems here which necessitated delaying your arrival in Jidda.

You will recall, however, that we discussed the desirability of your visiting Dhahran shortly after your arrival in Saudi Arabia, and I am sure you will find your stay on the east coast profitable. I believe Mr. Hamilton has some constructive suggestions to make for agriculture work in that area.

If it seems feasible to have agriculture specialists there, I hope you will explore the housing situation. During this period of the Hajj, there have been almost no Saudi Arabian officials in Jidda and I have not had an opportunity to discuss the Asir project with any one. The Deputy Finance Minister presumably will return to Jidda within a few days. Since he raised the question of an expanded program in the Asir, I am sure he will be interested in the problems which we discussed in Washington. I shall, of course, make no commitments since you might favor initiating work in some area other than the Asir.

I hope this note finds you in good health, and that before your consultations in Dhahran are finished we may be able to give you some favorable news in regard to housing here.

Sincerely yours,

Samuel S. Stratton
U. S. Director of Technical
Cooperation in Saudi Arabia



UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

*File - Info. on Saudi
Arabia.
Agriculture*

MEMORANDUM

October 29, 1952

TO: Division Chiefs in - Agriculture ✓
Education ✓
Transportation and Communication ✓
Natural Resources ✓
Finance
Public Health ✓

FROM: Edward Batesig

RE: Agriculture in Saudi Arabia

The attached article presents a ~~clear~~ and relatively up-to-date survey of Agriculture in certain parts of Saudi Arabia.

It is regarded as basically a sound exposition and as such should be read by staff members. The type of information given in this report is difficult to obtain for Saudi Arabia.

It would be appreciated if field technicians would bear this analysis in mind when writing monthly reports and thus contribute to knowledge about Saudi Arabia.

Note: Notes were attached to individual copies asking that Agriculture, Health and Natural Resources keep their copies for their files and future reference.

Education, Transportation and Communication and Finance Divisions were asked to return their copies for our files.

RECENT AGRICULTURAL DEVELOPMENTS IN SAUDI ARABIA
DOUGLAS D. CRARY

How to utilize its petroleum income in the best national interest is the difficult problem Saudi Arabia faces today. Any large-scale development in the Western sense is precluded by the desertic nature of the country, the lack of natural resources other than oil, and the way of life of a large part of the population. But there do exist certain opportunities for improving the standard of living, and one of them lies in an increase in agricultural production—within definite geographic limitations.

The Saudi Arabian government currently receives from the Arabian American Oil Company (ARAMCO) in the neighborhood of ninety million dollars/a year, whereas in pre-petroleum days the annual revenues was about seven million dollars, derived principally from a head tax on pilgrims to Mecca. The newly acquired and constantly increasing wealth, together with the emergence of the country from the penumbra of isolation to an active role in Near Eastern affairs, has provided the means for a program of internal development. And a reassuring beginning has already been made.

The introduction of mechanized agriculture in Saudi Arabia is not as recent as the popular journalists would have us believe. Nor does the credit for its initial success belong entirely to "a handful of Texas farmers." Nor are the sands of Arabia "being made to bloom again with waving date palms, alfalfa that gives 14 crops annually, and giant watermelons." Loose statements of this nature create the false impression that a little American know-how scattered anywhere can produce a land of plenty overnight. Nothing is said about costs and difficulties.

Another general misconception, particularly in connection with certain aspects of Point Four thinking, is that Americans can go to Saudi Arabia and "teach the Arabs how to farm." Practically everything Americans know about the basic principles of irrigated agriculture was known to the Arabs two thousand years ago. The Americans can, however, apply mechanized power, the use of fertilizers, seed selection, and other new knowledge to an age-old agricultural system and thus point the way to increased yields and somewhat greater self-sufficiency. This in essence, is the objective of the current Saudi Arabian agricultural program.

1. Actual statement made to the writer by an American government official entrusted with Point Four planning.

Note: Dr. Crary is assistant professor of geography at the University of Michigan, Ann Arbor. His interest in agricultural problems in the Middle East is of long standing and has resulted in numerous articles, one of which "Irrigation and Land Use in Zeiniya Bahari, Upper Egypt," appeared in the Geographical Review for October, 1949.

THE BEGINNING AT AL KHARJ

A plan for the development of agriculture along Western lines was formulated in the middle 1930's by Sheikh Abdullah Sulaiman, minister of finance, with the approval and support of the King. The first concrete application was made in 1937 at Al Kharj, eastern Nejd, about 55 miles southeast of Riyadh, political capital of the country (fig. 1) It consisted in the importation of pumps, a mechanic, and a farmer from Iraq, and a vegetable grower from Palestine. Later, Egyptian mechanics and farm demonstrators were brought in, and the Iraqis departed for home. With the Egyptians came three Arab farmers from Qasim as overseers. In 1941, during the period of Egyptian supervision, six tractors were purchased by the Saudi Arabian government through Aramco. It is an interesting fact that this first use of power-driver farm machinery in Saudi Arabia took place before Americans had anything to do with the agricultural program.

In 1942, at the invitation of the King, an American agricultural survey mission visited Saudi Arabia. This mission, purely advisory, made recommendations pertaining to the development at Al Kharj and to other localities in the country as well as to irrigated agriculture in general. (2) In the preceding year preliminary soil, water, and land surveys by Aramco technical personnel (3) had determined the direction the Al Kharj project was to follow.

The year 1943 was perhaps the critical one for the project. Certain problems brought about the removal of the Egyptians, and the Arab overseers temporarily assumed the agricultural responsibilities. The technical phase was taken over by engineers lent by Aramco, (4) the first Americans to participate actively in the Al Kharj development. Their labors consisted chiefly of canal and general construction and pump installation. This Aramco team literally did the spadework that made the present large-scale farm program possible.

While Aramco personnel were improving the engineering features of the project, the Saudi Arabian Government was preparing the way for an expanded agricultural program. Arrangements were made with the United States Department of State through the Cairo office of the Foreign Economic Administration for an official agricultural mission to Saudi Arabia. This mission, under the leadership of Mr. David Rogers, arrived at Al Kharj in November, 1944, and stayed 18 months. It brought some new land under cultivation and introduced new crops.

The withdrawal of the FEA mission early in 1946 because of lack of funds left the Al Kharj project with well-developed facilities but no management. Aramco again came to the rescue by lending personnel to the government. As before, these men were engineers, not professional farmers. They succeeded in holding the project together along the lines established by the FEA mission, but they lacked both numbers and experience to continue the expansion program. They were relieved in January, 1947, by half a dozen American country extension agent, recommended by the United States Department of Agriculture in anticipation of a new agricultural mission. The mission failed to materialize, and the American farmers were eventually taken over by the Saudi Arabian Government.

Thus the Al Kharj Agricultural Project is exclusively a Saudi Arabian venture, though it has enjoyed the benefits of American cooperation and advice.

2. See "Report of the United States Agricultural Mission to Saudi Arabia" (Cairo), 1943 (in English and Arabic). The mission consisted of K.S. Twitchell, consulting engineer, Saudi Arabian Mining Syndicate, Ltd.; A.L. Wathen, Chief engineer, Office of Indian Affairs, U.S. Dept. of the Interior; and J.G. Hamilton, Senior Agronomist, Soil Conservation Service, U.S. Department of Agriculture.

On one aspect of the problem Mr. Twitchell wrote for the Geographical Review (Water Resources of Saudi Arabia, Geogr. Rev., Vol. 34, 1944, pp. 365-386).

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FOOT-NOTES FROM PRECEDING PAGE—

3. Dr. R. A. Bramkamp and T. C. Barger, geologists, and L.M.Snyder and Archie Perry, engineers.
4. Harvey Brown, Archie Perry, John Ames, and Merle Holbard.

SETTING OF THE AL KHARJ PROJECT

Tumuli on the south ridge overlooking the valley and numerous ruins on the valley floor testify that Al Kharj is an ancient oasis. Its recent development lies simply in greater use by mechanical means of water from sources that have been known for centuries. Today the Al Kharj project comprises some four and a half square miles of irrigated bottomland in Wadi Kharj adjacent to the settlements of Yamama and Sulaimiya and more than a square mile at Khafs Daghra, 27 miles to the south. The results at Al Kharj, and Al Kharj alone, have been spectacular.

The outstanding feature of the Al Kharj oasis is the occurrence of large pits formed by the solution of anhydrite from the natural limestone and containing vast quantities of water. There are three pits at Al Kharj; Ain Dhila, Ain Semha, and Ain Umm Khisa. The twin pits of Ain Dhila and Ain Semha are each about a hundred yards across and contain water perhaps 450 feet deep; the water level is about 40 feet below the rim. That these pits are connected by underground caverns is shown by the fact that when one pit is pumped, the water level in the other shows a corresponding decrease. Pumping lowers the level about 30 feet, but no more. Ain Umm Khisa, a mile or so away, has caved in, and its water is only about 45 feet deep. It was pumped dry experimentally in 1949 and has thus been proved to be of no permanent value. At Khafs Daghra the single pit of the same name is about 50 yards in diameter and has a depth of some 75 feet. There are other pits at Aflaj, about 150 miles south of Al Kharj, but no reclamation project has yet been undertaken there. It is definitely established that the ground water in all these great natural wells has accumulated over a long period from the few inches of annual winter rainfall on the eastern slopes of Jebel al Tuwaiq, 150 to 200 miles to the west.

The soils in Wadi Kharj range from a tight colloidal clay to a sandy loam; they are no better and no worse than in many other places in Saudi Arabia. The principal difficulty they present is the alkali derived from the water, which eventually renders the soil unfit for general agriculture. Already much of the land at Al Kharj has been abandoned.

Wadi Kharj joins Wadi Hanifa, coming in from the northwest, at a point 10 miles east of the great pits to form Wadi Sahaba. In the broad expanse of alluvial soils at the junction there are perhaps twenty or thirty thousand acres suitable for farming, probably best for wheat. However, the available water from the pits is insufficient to supply this area; hence cultivation is restricted to Wadi Kharj, close to the water source. The total acreage in crops in the Al Kharj project is about 3500 in winter and 2500 in summer.

Most of the water irrigating Al Kharj is now obtained from Ain Dhila, where four diesel-powered deep-well turbine pumps, originally installed in 1944 by the Aramco engineers, lift 11,000 gallons a minute. This is supplemented from two small wells, Ain Sha'aba and Ain Nabah, which are equipped with gasoline pumps. The few other wells in the area are small and independent, but it is hoped that in the future their output can be channeled into the project system.

AL KHARJ FARMS

One of the principal contributions of the first group of Aramco engineers at Al Kharj was the construction in 1943 of the new main canal, which carries the water pumped from Ain Dhila a distance of nearly 10 miles through the project to the head of Wadi Sahaba. Its installation brought the entire Al Kharj development within a cohesive and organized system. It distributes water to the seven divisions of the project. In order from Ain Dhila (Estimated acreages as of May, 1948) they are:

1. Sha'aba Farm, about three miles down the canal from Ain Dhila, has about 35 acres in dates and about 115 acres in vegetables and wheat.
2. Palestine Farm (name derived from a local inhabitant) has 12 acres in pomegranates, 30 acres in dates, and about 20 acres in vegetables and wheat. Its irrigation is supplemented by water from Ain Sha'aba.
3. Nabah Farm has about 45 acres in dates and 20 acres of other tillable land. Its irrigation is supplemented by water from Ain Nabah.
4. Heish Farm has about 175 acres in dates and about 75 acres of other tillable land, devoted principally to wheat.

These four farms, totaling nearly 550 acres, lie nearest the water supply where the land has been cultivated by ancient methods for centuries. Alkali accumulation is pronounced, and land now used for vegetables and wheat is gradually being given over to alkali-resistant dates.

5. Musri Farm has about 40 acres in dates, 325 acres in wheat, and 110 acres in a great variety of truck crops. It has lately been expanded. Also, an experimental station of some 100 acres is currently being established at Musri Farm by displaced Palestinian Arabs.
6. Baksheesh Farm is not cultivated by the American group. It is power-plowed in the fall, then, as its name implies, is left for any casual farmer wishing to take advantage of free land and water to raise a small crop. Baksheesh Farm comprises about 80 acres, of which only 50 are normally cultivated. Because it has not received the same attention as the other farms in the newer part of the project, its soils have begun to crust up with salt.
7. Bijidiah Farm is the largest and newest in the project. It has 425 acres of alfalfa, 235 acres of wheat, and about 130 acres of vegetables. About 16 acres of alfalfa are double-cropped with figs, and about 50 acres with dates. The alfalfa gives 12 to 15 cuttings a year, but it must be remembered that this yield is from newly cultivated land; the bacteria from the alfalfa are building up the nitrogen content of the soil. The crop is transported by truck and camel to Yamama, where one of the King's many horse farms is located.

As Bijidiah Farm is at the far end of the main canal from Ain Dhila and much water is thus lost in transit by evaporation and seepage, the farm is operating close to the margin of safety in regard to the present (1948) water supply. Under existing conditions, any further extension of cultivation into the wide alluvial area of Wadi Sahaba is clearly inadvisable.

KHAFS DAGHRA FARM

Before Sheikh Abdullah Sulaiman initiated development in 1941, Ain Khafs Daghra was nothing more than a Bedouin water hole in a barren waste. During the first year, with three tractors and three German-made pumps as mechanical equipment, the farm produced 5000 sacks of wheat. In 1943, at Sheikh Abdullah's request, an Austrian engineer installed a new lift system consisting of a large generator and eight electrically operated pumps. The farm program was in local hands. A year after the arrival of the FEA agricultural mission, Dhafs Daghra Farm was added to the Al Kharj project (1945), and it has since been supervised by Americans.

In most respects Khafs Daghra Farm is similar to Al Kharj. It is irrigated in much the same way--by lifting water from a natural limestone solution pit--though the supply is less bountiful. The lift is greater, 70 feet as opposed to 40 at Ain Dhila, and until recently (1948) the capacity was only 2000 gallons a minute. Consequently, Khafs Daghra Farm was devoted principally to wheat, 600 acres; the remaining 200 acres were in grain sorghum and vegetables, with five acres of dates. In the last two years, however, two new diesel-operated centrifugal pumps (8 inches and 10 inches) have been installed at Khafs Daghra, which provide a present total delivery of some 5000 gallons a minute. The effect of this greatly increased supply on kind and acreage of crops is not known to the writer.

ECONOMY OF THE AL KHARJ PROJECT

For the entire Al Kharj project the list of crops grown reads like a seed catalogue. Besides dates, wheat, alfalfa, and grain sorghum, the following were seen: barley, oats, maize, tomatoes, watermelons, onions, egg-plant, sweet and hot peppers, carrots, parsley, cabbages, cauliflowers, lettuce, daikon, cucumbers, pumpkins, squash, turnips, rutabagas, beets, okra, beans, peas, peanuts, lentils, pomegranates, figs, citrons, and grapes, and there may well be others. This great variety emphasizes the experimental nature of the project. An effort is being made to determine which crop does best and which appeals most to the Arab taste. The large Texas watermelons have proved very popular.

Most of these crops are grown throughout the year, but winter is the preferred season because temperatures are lower and some rain falls. The single wheat crop is planted in the fall and harvested in April; the average yield is 20 bushels to an acre, but it is said that this could be doubled by the use of better-quality seed and the addition of 100 pounds of ammonium sulphate to an acre. In fact, the application of ammonium sulphate to all the land in crops would considerably increase productivity.

LIMITATIONS TO AGRICULTURE AT AL KHARJ

In Saudi Arabia the most significant geographic factors limiting crop production are water, soil, location, and transportation facilities. At Al Kharj conditions, though by no means ideal, are favorable enough for successful economic operation by applied agricultural engineering. Water is available to irrigate a limited amount of good soil, a population center is sufficiently close to ensure a market, and truck transportation is available. (5) The market is in Riyadh, and the trucks belong to the government, a circumstance in keeping with the fact that the Al Kharj project is the first of its kind and is largely experimental.

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However, two difficulties arising from the natural environment constitute a real threat. The first is the possible limit of the water supply. In one critical locality, which also obtains its water from the eastern slopes of Jebel al Tuwaiq, the water table dropped 35 feet during a recent four-year period, chiefly because of a rather intensive use of newly introduced drilling rigs and pumps. At Al Kharj itself, the water level in Ain Dhila and Ain Semha has dropped 20 feet since their first pumping in the 1930's. Uncontrolled expansion of crop acreage under present conditions could cause irreparable damage to the underground water resources. To produce more and more food is a natural and desirable objective. If the acreage at Al Kharj is to be increased, as at Bijidiah Farm, the ratio between the supply of water and the demand for it must be rigidly maintained. Scientific study of water resources is imperative to determine how much is available to support agriculture, not only at Al Kharj but elsewhere in Saudi Arabia. Such a study is entirely feasible (6). Meanwhile, conservation measures of the highest order are indicated, not to reduce present crop acreage or requirements but to eliminate unnecessary loss; (7) such measures are likewise entirely feasible.

The second prime difficulty results from the salinity of the water. The alkali content is not too high to prohibit use of the water for general agriculture on virgin soils, but over a period of years calcium sulphate is deposited in the topsoil horizons by the evaporating soil moisture. In time this ruins the soil, as has already occurred in the upper and older part of the project, where the land has been abandoned or converted to salt-tolerant dates. The length of time between reclamation and abandonment or conversion depends on the salt content of the soil, its texture, the ease of drainage, the availability of minerals to use in replacement of the more detrimental elements in the colloid, and the availability of pure water for flushing. Electrical precipitation, deep plowing, or subsoiling plus adequate flushing (8) and deep ditching would seem to be about the only means by which the alkali condition can be kept in check. Yet proper flushing further depletes the water supply. Tile drains, even if available, would simply crust up and become useless in a short time.

6. G.F. Brown: The Geology and Ground Water of Al Kharj District, Nejd, Saudi Arabia (Thesis, Ph.D., Northwestern University, 1949; manuscript). Dr. Brown was associated with 1944 FEA agricultural mission to Saudi Arabia and is now (1950) in that country fulfilling the recommendation made above.
7. See "Report of the United States Agricultural Mission to Saudi Arabia" (op. cit), pp. 47-48 and 62-63.
8. Ibid., pp. 64-65.

ANALYSES OF AL KHARJ WATER*
(In Parts Per Million)

		AIN		AIN	
AIN DHILA		KHAFA'S DAGHRA		KHAFA'S DAGHRA	
	Iron		156	Chloride	240
2.8	Iron & Aluminum	2.7		Fluoride	1.5
602	Calcium	537		Nitrate	0.9
94	Magnesium	108		Borate	4.3
112	Sodium & Potassium	119	2,845	Dissolved Solids	2,619
124	Bicarbonate	104			
1,737	Sulphate	1,543	1,890	Total Hardness	1,785

*Brown, op.cit. Ain Dhila analysis by Arabian American Oil Company. Ain Khafs Daghra analysis by Burdge Irelan.

The Al Kharj project has shown what can be accomplished not only in agricultural production but also in raising the standard of living (9) of its 1200 Arab farmers and mechanics and those who receive the benefits of its varied produce. The lessons learned at Al Kharj can be advantageously applied elsewhere in the country. Such projects occupy an important, indeed a necessary, place in the internal development program undertaken by the Saudi Arabian government. The oases of Qatif, Hofuf, and Taif and an area in Wadi Fatima have been selected for demonstration projects. Only at Hofuf, however, has any significant progress been made.

THE HOFUF AGRICULTURAL PROJECT

Conditions at Hofuf are in marked contrast with those at Al Kharj. The oasis containing Hofuf (10) and surrounding villages is probably the largest in Saudi Arabia, with an estimated 27,000 acres under native cultivation and a population believed to be about 150,000. If these figures are correct, the population density is more than 3500 to a square mile. An artesian flow of water from at least nine springs gives an estimated total discharge of 93,300 gallons a minute. (11) In its present state, Hofuf is the only locality in the country with a surplus of water. But in spite of this abundance, the oasis is not self-sufficient in food. More than 90 per cent of the cultivated areas is in date gardens, many of which are several hundred years old, with individual palms of 80 years or more that are no longer very productive. The intense pressure of population on the land, the inability of native technology to expand the cultivated area, and the concentration on a single crop with relatively low yields illustrate the need for an agricultural improvement program.

In 1949, at the request of the Saudi Arabian government, the Hofuf Agricultural Project came into being with the transfer of a few American farmers and mechanics from Al Kharj. These specialists were confronted by a tradition-bound agricultural economy unaffected by Western contacts. Because of the shortness of the time, the principal gains so far consist in complete cooperation from Arab officials and admiring stares from Arab farmers - the latter a definite achievement. The Americans began their demonstration with six tractors and two government gardens totaling 150 acres, all in rice paddies. To accommodate the tractors, a few date palms had to be removed and many bridges had to be built across irrigation ditches. One of the first steps was to lay out vegetable seedbeds, so that improved seed could be distributed free to the farmers.

9. See "Report of the United States Agricultural Mission to Saudi Arabia" (op.cit) pp.75-76

10. Hofuf is actually one settlement in a group that comprises several villages and Al Mubarraz, a town of considerable size. In American usage the name Hofuf is usually applied to the entire L-shaped cluster of settlements that make up the oasis. The Arabs, however, usually refer to the Oasis as Al Hasa and do not ordinarily use this name for the province foreigners call Al Hasa.

11. Twitchell, Water Resources of Saudi Arabia (op.cit). P.384.

Besides dates, Hofuf farmers grow alfalfa and rice, and also many other crops, though not of the best quality or in sufficient quantity to affect the diet. A list merely indicates what could be attempted in the way of improvement: limes, small peaches, a few apricots, some new oranges from Iraq, pomegranates, citrons, grapes, figs, wheat, the native tomato, eggplant, hot peppers, long native cucumbers, melons, long-podded native beans, hot native onions, and a few varieties of pumpkins. Of the fruits, limes and grapes probably do the best and have the best flavor. Oranges are speculative, having been introduced recently by one of the wealthy families. American development already begun includes work on tomatoes, eggplant, and onions, with a view to producing better seed, and the introduction of more root crops, specifically carrots and turnips. Considerable effort will be given in the near future to improving fruit crops as well as to increasing the variety and quality of vegetables.

Hofuf farmers seem to have a good knowledge of farming, perhaps better than elsewhere in Saudi Arabia. Date gardens are broken every two or three years; for owners who can afford the cost, every year. Rice paddies, of course, are normally turned each year. The farmers know how to compost manure and other organic materials and how to maintain fertility by incorporating the mixture into the soil; fields are turned over to a depth of two or three feet. Cultivation is entirely by hand. No animal has been observed doing any plowing or cultivating work, in contrast with Al Kharj, where bullocks are frequently used. The farmer's only tools are large and small mattocks and a sickle-type hand knife, but with what he has, he does a remarkably good job.

The American supervisory program at Hofuf has been organized with particular emphasis on improving plant stock and demonstrating mechanized farming methods. The groves and fields in which rice is grown offer the best possibilities; they are of sufficient size and number to justify the use of several tractors. In the date gardens the crowding of as many palms as possible into a small area, in the mistaken belief that a larger date crop will be obtained, is typical of the old economy and is perhaps the greatest obstacle to mechanization. With hand cultivation, the spacing of the trees does not greatly matter, but where the American program calls for the use of tractors, the groves must be thinned out. The reduction in the number of trees is compensated by increased yields per tree.

Expansion of the Hofuf project depends on the availability of enough good land near by suitable for reclamation and an adequate supply of water. Little is known about the open lands, which, it is believed, have never been cultivated. The salt content is probably high, and much water would be required for leaching before cultivation could be attempted. The local Arabs are confident of the availability of water, and one of the American farmers has expressed the opinion that enough water is available in the Hofuf area to develop 40,000 acres of new land. The site for a 4000 acre reclamation project has already been selected, and the search for water has begun. If it proves successful, most of the American effort will be devoted to bringing the open lands into production. The Hofuf project will then be similar in most respects to the Al Kharj project. The chief difference would be the turning over of the reclaimed land to small farmers who would work under American Supervision for the Saudi Arabian government on a tenant basis. This would relieve to some extent the pressure of population on the land in the older part of the Hofuf oasis.

The introduction of mechanization has given rise to several closely related problems. One of these concerns the education of at least a part of the population in basic agricultural and mechanical methods. Little can be accomplished by explaining the reasons for things, but much when definite results can be shown; as the plan develops, the principles will take care of themselves. The significance

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of the educational aspect of the agricultural program in Saudi Arabia cannot be overemphasized. No amount of farm machinery will do the least good if the Arabs do not know how to operate it and take care of it.

The relationship between manpower and machine raises a problem, though the solution seems clear. If a modern machine can be shown to do a specific job better than men, and is economically feasible, then success is assured. For example, a cub tractor with full equipment costs about 3500 Saudi riyals (\$1050)(12) This cost, either for the government or for a private operator, is approximately the equivalent of the wages of eight farm laborers at four Saudi Riyals a day, the prevailing standard, for three or four months. The eight laborers could be readily absorbed by the expanded program a tractor would make possible, in increased acreage, increased production, and increase in operations generally.

Making power-operated equipment available to the Arab farmer is also somewhat of a problem. To continue with the example of a cub tractor, one owned by the government might be used first in a pilot project on government land, or one owned by a well-to-do landowner might be used on his own estate. When once a demand had been created, a tractor could be purchased either by contractors who would serve a number of farmers, or by a group of farmers on a cooperative basis. The contract method has already been proved successful by Aramco's experience in other kinds of work, and it is adequately provided for in the laws of the country; cooperative ownership, on the other hand, is relatively new in Saudi Arabia. The contract method would also probably be the more satisfactory working arrangement, since the contractor would be freer to operate than the ordinary farmer because his tractor would constitute his sole source of livelihood. The Americans, as representatives of the Saudi Arabian government, would supply technical knowledge, train operators of mechanical equipment, and work out the prices the contractors would charge the farmers, all of which would be integral functions of the over-all agricultural program.

But the critical and most frightening aspect of the expansion of agriculture in Saudi Arabia is the relationship between mechanical power and the potential water supply. The development of mass agricultural production creates a vastly increased demand for water-the vital resource. At Al Kharj and other localities an enormous amount of power has recently been applied to obtaining water from the ground, and already ground-water levels have sunk. The difference between digging a well with a power-operated drilling rig and digging it by hand is obvious. So is the difference between a diesel-driven pump delivering a thousand gallons of water a minute and a donkey well delivering two or three.

The need for a basic study of ground-water resources cannot be over-emphasized. Should the water supply fail, Saudi Arabia would return to the desolation whence it came. The future of the country lies therefore in the wise utilization of its most precious but limited resource, and in the methods of safely capitalizing on it.

12. One riyal equals about 30 United States cents.

See Agri

MEMORANDUM FOR THE FILES

FROM: Mr. Edward Betzig

RE: Meeting with Mr. Garry Owen; Mr. J. G. Hamilton, Agricultural Adviser of Aramco; Mr. Dunaway; and Mr. Betzig, August 19, to discuss various aspects of Aramco's Agriculture Program and Point 4 and FAO Agriculture Programs.

Recommendations of Mr. Hamilton are as follows:

1. Efforts could be profitably expended in two areas:

a. Hofuf-Al Hasa area, and

b. The Asir

Mr. Hamilton suggests that the Al Hasa program be conducted by two soilsmen - one irrigation engineer and one drainage specialist. Work to be concentrated in three areas - Qatif, Hofuf, and Jabrin. Study should be made by these specialists with emphasis on proper drainage, linking of wells and springs to provide maximum use of water, and techniques adopted to prevent soil from being damaged by accumulation of excess salts.

Stressed importance of Jabrin as potential development area. At present little is done here due to excess ground water which damages soil, and the dry summers. If water were properly controlled through drainage, etc., this area plus the above two should provide in the neighborhood of 60,000 productive acres.

In Hamilton's, and the consensus of other participants, the Al Hasa area is important for the following reasons:

1. Large local labor market available;
2. Large consumer market;
3. Well developed local transportation system;
4. Adequate supplies of water;
5. One of the few areas in Arabia which has been mapped and studied by Aramco geologists - thus providing basis for scientific development.

6. Area's

6. Area's population growth due to oil industry creates potential area of discontent due to high price of imported food. This factor has great political and economical implications, and its nearness to troubled Persian oil areas is to be noted.

Aramco's great interest in area would insure valuable technical and other aid.

The Asir: Hamilton stated that the Asir has definite agricultural potentialities; however, problem of cooperation with FAO is present. Asir would provide food for markets in Mecca, Medina, Taif, and Jidda currently deficient. Yet this would involve investment in roads, dams, irrigation works, and other capital consuming projects. Consensus of opinion was the following:

Asir has: (1) available local labor, (2) potential market in Hejaz, (3) lacks transportation network, (4) would take a great deal of money for development. This factor is of prime importance due to fact that up to the present time SAG has contributed virtually nothing to Asir development other than expressions of interest. It is likely that outside agency, such as Point 4, would have to contribute large sums if such development could take place.

In contrast to Al Hasa, Asir not likely to be political trouble spot in future. Adequate water supplies, good quantity potential agricultural land capable of producing a variety of crops.

Hamilton would definitely give first priority, however, to Al Hasa.

2. Hamilton suggested that no recruitment be done in Washington for Point 4 technicians until field chief had opportunity to survey country and decide upon program and thus know what technicians would be needed. He does not favor organizing experimental stations or agricultural college; says while they are necessary in long run they would probably be of little use at this time. Thinks a date man could be most profitably used who would be able to select the best varieties and then have the program set up with the objective of teaching proper spacing of trees and the use of first-quality trees. States that a small farm can profitably be dedicated to plantings of selected variety which would become the center for wide distribution. Said he would not pay attention to isolated oases but would concentrate on certain limited areas.

Stated one of reasons for SAG disinterest in Asir is fact that many parts of it are largely of Negroid and not of Arab descent.

Hamilton

Hamilton stressed the advisability of starting nothing that would likely collapse as soon as Point 4 assistance is withdrawn - or to put it better, affirmatively to engage only in such projects as the Saudis could be expected to carry on without aid.

He did not favor experiment stations and agricultural colleges at this time. These take too long to show concrete results - and they have the additional disadvantage of lack of persons with sufficient scientific knowledge to benefit from them. Two or three demonstration farms would be better - farms on which what is already known in the way of improved varieties of plants, methods of culture and water-handling would be demonstrated. No place either for "extension agents" at present.

The first step is the soil survey at each place water for irrigation is available. Since water will be insufficient for all land, it is advisable to select the land with the best soil. Like - wise an experienced irrigation engineer is necessary as well as experienced drainage engineer.

CC : EDFMS

Agriculture

PARTIAL PROGRAM FOR AGRICULTURE IN HASA-HIJAZ-ASIR
(Asir Program to be developed in greater detail separately)

The Province of Al Hasa is one of most importance in Saudi Arabia and offers some of the most fruitful possibilities for Point IV work. Amongst the favorable circumstances are the following: relatively abundant water supplies; relatively large areas of oasis - cultivated lands; the best road network in Saudi Arabia besides the railroad from Dammam to Riyadh; a fairly concentrated population living in farms and villages; a local market for produce; an attitude towards progress and change, perhaps the most notable in Saudi Arabia, etc. These factors indicate that Hasa would probably benefit more quickly from Point IV technical aid than would more remote and difficult areas. Much work has to be done here. It is estimated that 95% of the arable land in the Province needs proper drainage. The water table is now less than two feet. Under these conditions, land has to be kept nearly saturated to keep the salt solutions down so that plants can grow. These notes have been drawn up with the help of Mr. J. G. Hamilton based on his studies and experience in Saudi Arabia.

It is suggested that recruitment ~~for~~ ~~have~~ follow this pattern:

A. Extension agents in Hofuf, Tihama*, 'Asir. In Hofuf he would be a Rice Specialist. He should be recruited probably from Arkansas, Louisiana, Texas, California, etc., and be an agronomist with experience in rice. He ought to be informed on equipment for low, small production areas, such as would be used in Latin America or Asia. His duties would include the following.

1. Trials in rice variety - bring suggestions from America as to kinds. Here it is suggested that varieties of long-season and short-season be tried. Rice now grown in Hofuf is a red type of very inferior variety. It is also poorly handled, grains are cracked, etc. Prior to coming, rice hulling machines should be checked for use in Saudi Arabia. They ought to be light and reasonably priced.

2. Carry on tests on varieties of pomegranates, grapes, irrigated pasture (grass trial planting), etc.

3. Prior to coming, man should check with Bureau of Plant Industry, Beltsville, Md., for varieties of sugar cane and bring several types with him for tests in Hofuf and Tihama, 'Asir.

* (Tihama experiment would be carried on by extension agent with speciality and duties to be determined later.)

The Hofuf area has sandy to clay loam soil, poorly drained. The Tehama is a silt loam soil, well drained. Both areas have irrigated soils and would appear promising for cane. The experiments would not need constant checking.

4. Prior to departure, the Tihama agent ought to get an assortment of sorghum (syrup variety) from the BPI for experiment here. These would be tested in Tihama, Asir in land which received one heavy soaking a year. The Tihama region now is planted in grain sorghums which grow to heights of from 12 to 16 feet. It is likely syrup sorghums would do as well as grain sorghums. The latter's grain is now used for human consumption; the leaves for animal fodder, and the stalks for fires. Syrup sorghum would produce syrup and dark sugar which could be easily marketed in Jeddah, etc.

Mr. Hamilton recommends Mr. Van T. George, Jr., who formerly ran the experiment station at Hofuf for the position as extension agent in Hofuf.

Recruit preferably ought to be a single man. Probably could live in part of abandoned experiment station at Hofuf. Would have to make arrangement with FAO if they are using this station.

B. Three Drainage and Soils Technicians. Major work ought to center on drainage investigations and soils work. These men won't touch more than the surface of work to be done in Hasa in five years. This is basic work

Recruitment --

1. The Chief ought to have experience in drainage investigation and studies, layout work, soil mapping.

2. Two Assistants - graduates of colleges who have majored in soils, preferably with soil survey experience. Preferably single men. One would be stationed with Chief in Qatif area; one at Hofuf.

The need for an experienced Chief can't be overstressed. The work is very complicated involving alkaline-saline salts, high water tables, etc., and thus experience in Southwestern United States under comparable conditions is almost a necessity. He would be able to train his assistants. Mr. Hamilton recommends Mr. Wm. LeVee of the Soil Conservation Service, Yuma, Arizona.

The work of this group would be basic. Land now under cultivation can be considerably improved. New land such as the Government is planning to develop some distance from Riyadh should be surveyed by this group and the best areas selected. There will be other areas of this type to be studied.

In order to have any kind of an agricultural program in the Qatif-Hofuf areas, drainage work must be carried on. At the present time, dates are the major crop - as they always will be due to dates being particularly adapted to conditions in Saudi Arabia. Now they are grown almost to the exclusion of all other crops. Date planting would be encouraged but planting would be in wider rows than are customary now. The increased light and better drained soil would permit the planting of other crops between the rows. This would permit the extension man (noted above) to help on increasing the planting of vegetables and field crops. In this way a considerable quantity of truck and garden produce could be raised; namely, squash, potatoes, pumpking, peas, tomatoes, okra, egg plant, spinach, turnips, carrots, etc. Currently, they are a rarity as they can't be grown until the salts are leached out of the soil.

The Chief and his assistant in Qatif area would have to live either in Damnam or quarters to be provided at the American Consulate.

The soils man in Hofuf could probably live with the Rice technician. If housing were not available, prefabricated quarters could be provided.

C. Sheep-Wool Technician (Nejd-Hasa-Hijaz). Need exists for improvement of methods of sheep shearing. It is suggested that a man be recruited preferably from Texas with experience with sheep - a college degree would not be necessary. He would need a jeep, field equipment, etc., shearing machine, and hand clippers with which to demonstrate to different Bedouin tribes how to clip the animals. At the present time little shearing is done other than for individual use and small sales in local market, and clipping is inefficiently done with butcher knives. Technician would seek to show Bedouin benefits to be derived from shearing animals in early spring and fall. In some areas clipping twice yearly could be of benefit to the sheep - less weight to carry, etc. Purchasers for wool ought to be found and Bedouin shown the potential market. Demonstration would include shearing of enough sheep with machine so as to deliver wool in sufficient quantity to show the Bedouin its market value. In the past the Bedouin hasn't supplied much wool to the market. The Technician should teach the Bedouin the use of sheep shears. These are cheap and easily used. This implies that the technician knows how to clip with hand shears so as to be able to instruct.

Technician ought to have sufficient experience with animals to demonstrate to the Bedouin single livestock management. He ought to be a young man willing to rough it as he will have to spend most of his time amongst the Bedouin tribes. Due to irregularity of shearing in Saudi Arabia, he could be employed here all year round advising the Bedouin as to the best time to shear, etc. Adapting his routine to local climate conditions he could cover higher elevations and northern parts in the summer time and the rest of the country during the winter. Goat, and possibly camel, shearing would also be within his province. Knowledge of tribal concentrations can be provided thus enabling technicians to visit them while in their encampments.

D. Date Technician. He should be an expert with experience with a large number of varieties so as to make studies in local varieties and select the best for future plantings. Other types ought to be brought in for trial in Saudi Arab gardens. Cataloging of types ought to take place during the fall and during the winter and spring, measuring of leaves, study of plant disease, insect pests, etc.

Mr. Hamilton suggests that this work could be best carried on during six months of the year, May through October. He recommends Roy Nixon, an ecologist at the U. S. Date Experiment Station, Indio, California. Mr. Nixon has had considerable experience with date varieties and has done work in the Middle East.

Work would begin in areas with potentialities for date export - Qatif and Hofuf. The ultimate goal would be a survey and recommendation of all date producing areas in Saudi Arabia. Currently, the position of the date grower is not a good one. Governmental restrictions on date export during the war, an export of date confections to India; a decline in the donkey population and hence in date consumption as donkey feed; a shift in food habits on the part of local peoples to imported products, etc., have caused the date price to fall to low levels. I will supply greater detail re this matter in a separate report. However, it remains that the date is the prime food crop of Saudi Arabia and there is little likelihood that it will not continue to be so in the future. Hence, efforts should be made to improve the quality for export and local consumption. New road and rail lines meanshipment of dates is facilitated.

Emphasis should be on getting planters to replace poor varieties with good ones. Also to plant dates on an intelligent pattern - enabling them to make more money from fewer dates and additional income from between the row - truck, garden and feed crops. Currently, in many gardens, dates are grown to the exclusion of all else. With more and more people earning money incomes, food habits are changing and there is increasing need for local food production of several types. Nothing would be

more foolhardy considering soil, water, climatic conditions, etc., than to pull out dates - attempt to replace them with other basic plantings. Dates should remain the prime crop in any intelligent land use program in Hasa. Increased feed crop plantings between the rows is stressed as means of increasing local meat production. While all are predominately in dates, some oasis have a number of goats, sheep and cattle, mostly of inferior quality and poorly fed, also scattered plantings of fruit trees and vegetables. Intelligent management could greatly diversify the plantings and increase food production. He would not need equipment other than jeep, etc. On the first six-months trip he would come without his family.

E. Entomologist. He would make a survey of harmful insects in Saudi Arabia, listing and describing the life history of the insects and noting the means of control. He ought to be well-trained and experienced in field work. He could be stationed in Jeddah and in the areas where he carried on field work. Obviously, much of his work would be in Hasa and Asir as they are the two prime agricultural regions. He would spend a very large part of his time in the field. He would attempt to instruct local Amirs to collect insects in jars (this has been successfully done by the way on a very large scale for locusts and has produced quite remarkable results), as an aid in learning the types and incidence of insects. His equipment would include a jeep, camping equipment, insect jars and collecting nets, etc. If married, it is obvious his wife would be alone a great part of the time.

This suggested program attempts to get at basic conditions of Saudi Arabia agriculture. Improvement will be no easy task. Drainage work, soil surveys work of necessity ought to come first. With the information so furnished, it would be possible to begin a land improvement program and thus increase Saudi Arabia food supplies.

EB:fjs

General Comments
& Reports.

Report By Edens

on trip from Washington
to Jidda.

(F.A.O. Rome
T.C.A. Beirut
Agri in Hasa Province)

2/11/53.

Betsy to Duraney - "Thoughts on
S.A. Agri. Program"

2/9/53. Report of Edens to Taggart -

General Environment
Accomplishments
Plans.

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION
JIDDA, SAUDI ARABIA

October 23, 1952

*Information
on Saudi
Arabia
Agriculture*

Report on Visits with Food and Agriculture Organization Officials in Rome, Point IV Technicians in Lebanon, and a Brief Study of Agriculture in Eastern Saudi Arabia While Enroute from Washington, D.C., to Jidda, Saudi Arabia -- September 3 to October 8, 1952.

W. J. Edens, Chief
Division of Agriculture

F.A.O., ROME, ITALY

Upon arriving in Rome, September 3, an American Embassy representative met me at the airport and accompanied me to the Hotel Eden where reservation had been made. The next morning, September 4, I reported at the American Embassy. I talked with Mr. Harold Grover, Jr., who is in charge of the Transportation Branch. He succeeded in getting my plane reservation confirmed from Beirut to Jidda. The M.S.A. Offices are across the street from the Embassy where I visited for a short time talking with Mr. Robert C. Tetro, former Agricultural Attache and now Chief of F&A in M.S.A. Mr. Tetro and I discussed agriculture in Italy and efforts that have been made to produce sorghum in dry farming areas. A brief visit was made at the American Library next door to M.S.A.

At the FAO office building I met first with Dr. F. T. Wahlen, Director of the Agricultural Division; Dr. Karl Olsen, Assistant to the Director; and Mr. Tom E. Ritchie, Chief Technical Officer. Dr. Wahlen described the general situation in Saudi Arabia, what FAO has accomplished to date and plans for further work. He pointed out the importance of FAO and TCA cooperating and coordinating their work in Saudi Arabia. The visit was very satisfactory. I was next privileged to meet and talk with Sir Herbert Broadly, Deputy Director General, FAO.

Following the above visit, Mr. Ritchie made plans for me to visit with certain members of the staff. I met first with Dr. Karl Olsen. He presented a picture of the entire FAO program and we discussed many items of common interest. One item in particular dealt with the selection of national trainees for training abroad. Often the individual spends one or more years in training and upon returning to his country, finds that his goal has been changed in so many ways that his services are not wanted. Under such circumstances the person often tends to become a liability instead of an asset. Also, the trainee continues to think of directing instead of doing which does not provide a vocational instruction program that is needed. Part of our discussion dealt with examples of cooperation and coordination by interchanging technical knowledge, dividing up projects and intercontributions by FAO and TCA.

The next person with whom I talked was Dr. R. H. Fiedler who has charge of developing fisheries. He has recruited Dr. L. Saby of Egypt, an expert in fishes and fishing industry of the Mediterranean area; and

Mr. Frania, an Italian fisherman. A fishing boat has been procured and an exploratory study of the kind and quantities of fish in the Red Sea will be conducted which will require about six months. Dr. Fiedler hopes to learn by this study whether it will be economically sound for Saudi Arabia to attempt commercial fishing in the Red Sea and the Persian Gulf. Food for human consumption would be the primary objective with by-products and non-edible fish being used for other productive purposes. Having another product for export would be very desirable. In this interview I learned that an FAO representative is to be sent to Yemen to make a reconnaissance survey in general. Dr. Fiedler also stated that FAO hopes to develop the fishing industry in Israel and Somolialand.

I spent some time talking with Mr. Victor W. Bruce, Technical Assistance Officer. The discussion was confined primarily to policy and general programming.

Next, I had a long visit with Mr. Ritchie. His background is varied but mostly in agriculture and he had charge of agricultural programs in the Philippines under General McArthur. He appears to be a fine person to work with. The FAO program in Saudi Arabia was further presented by going into the details of what has actually been done. It was pointed out that six men have been working in Saudi Arabia during the past year. Mr. T. O. Smallwood, Irrigation Engineer; Mr. C. W. Burningham, Reclamation Engineer; Mr. C.O. Van Der Plas; Dr. H. J. Ferris, Soil Scientist; Mr. E. L. Baker, Date Palm Specialist; and Dr. J. D. Tothill, Agricultural Economist. Studies by these men have been completed and reports will be published.

The Asir-Tihama area has been selected by FAO for the beginning of an assistance program. Water resources surveys, soils surveys and other studies will determine the exact land area for this beginning. It is my opinion that FAO feels that sufficient reconnaissance water and soil surveys have been made to pin point the specific wadi for a start and that the next sixty days will witness the beginning of a program.

This program will encompass research, extension and academic study. I got the impression that extension work will not be initiated until more detailed land and water resources surveys have been made and experimental work with crops has been conducted. Such a procedure is fundamental but it will require much time for the people to experience its effect. Mr. Fred Johnson has been employed by FAO to have charge of their initial program in Saudi Arabia. I do not think he has been assigned a specific title. Mr. Johnson is to be sent to Saudi Arabia about October 1, to October 15, to establish a beginning site in the area by building living quarters for technicians.

The next day I visited with Dr. A. di Vajda, Agricultural Officer, (Land-Water Use Branch). Here I learned that Dr. N. P. Simonsky, Sudanese Irrigation Engineer, is being sent to Saudi Arabia to follow up and further evaluate the land reclamation survey and report made recently by Dr. C. W. Burningham, Reclamation Engineer. Dr. di Vajda emphasized the need for dams across wadis which will not wash out and

cause crop failures for certain years. Dr. Simonsky will study the possibilities of constructing such dams. It was also emphasized that Dr. Glen Brown had helped FAO very much in the above study and a hope was expressed that Dr. Brown could give further assistance. Dr. di Vajda further stated that a more detailed soils study will be made of the selected Tihama wadi than was made recently by Dr. H. J. Ferris before undertaking its development. In the near future, a farm management expert and meteorologist will be sent to the Tihama area. Dr. di Vajda indicated that FAO knows little about other Saudi Arabian areas.

Following the above, I talked with Mr. A. H. Maunier, Agriculture Extension Officer and Acting Chief of the Agricultural Institutions and Services Branch; Mr. J. C. Adams, Technical Assistance Officer; and Mr. J. R. Poulling, Agricultural Extension Officer; both of the above named branch. Dr. Garber, the new Chief, had not arrived. Discussion here centered around (1) the institution to be established in the Tihama area which will embrace research, extension, and more formal instruction; (2) methods of approach to the work undertaken; and (3) the need for coordination in TCA and FAO efforts and cooperation in every way possible. All personnel visited emphasized this third item. However, none recited past or probable experiences of coordination and cooperation beyond the work with Dr. Glen Brown. I got the impression in several visits that FAO will be happy to initiate projects and have TCA come in where items of sizeable expense are involved.

I visited briefly with Dr. W. Y. Young, Agricultural Officer (Farm Management) of the Land-Water Use Branch. This phase of the Agricultural program will come into the picture at all times to emphasize sound organization and operation of the farm as a business.

The last visit was with Mr. Ritchie where much of the above was further discussed. It was here that he told me more specifically of the work Mr. Fred Johnson will be doing upon arrival in Saudi Arabia. A site is to be selected for the initial program and accommodations provided for technicians and their families.

Between visits I took the opportunity to read much of the Tihama Soils Survey made by Dr. H. J. Ferris, not yet released. This survey was termed one of reconnaissance which is to be followed by one in detail. The survey begins in the north of the South-Asir-Tihama Area beginning with Wadi Itwad in North Tihama and continues to Wadi Taashar in the extreme south including ten other wadis in between. This area embraces approximately 338,540 hectares. Dr. Ferris recommends to the SAG that an Experimental Station be established immediately in the wadi to be selected and that the following studies should be started: Types and amounts of fertilizers needed on various soils, soil salinity, drainage, wind and water erosion, crop varieties and crop rotations suited, field arrangements and others.

Class 1 Available

Class 2 Available

Class 3 Available

Class 4 Available

The survey points out that the two methods of farming practices in the Tihama are, (1) flood cultivation or irrigation in wadis, and (2) rain or dryland cultivation on the plains. The two principal crops grown are durra and dukhn, a sorghum and a millet respectively. Durra is grown in the wadis under irrigation and dukhn is largely a dryland crop. Livestock found in the area are cattle, sheep, goats, camels and donkeys. Present fields are rectangular, about 25 to 30 meters, and are diked to impound flood waters. When the water has soaked in, it is then plowed by oxen and planted to durra. Seeding is at the rate of 10-12 kilos per hectare. Durra matures in about 3 months. It yields 800 to 2100 kilos per hectare. The only other important irrigated crop is sesame which is used for its seed oil. A good yield is 950 kilos per hectare.

Dukhn (fox-tail millet) is the principal crop grown under dryland or rain culture. It is adapted to sandy soils when rain is sufficient. It is seeded at the rate of about 350 kilos per hectare. Dukhn is also planted in some wadi channels. Its grain is used for food.

Soils surveyed by Dr. Ferris were divided into four classes based on desirability for producing crops—classes 1, 2, 3, and 4. Class 1 soils are of the highest quality for irrigation farming. They are smooth-lying with gentle slopes. They are deep, medium to fairly fine texture, good structure, and easily penetrated by water and air. These soils have free drainage and good water holding capacity. Due to visits or other interruptions, I failed to make notes on the other soil classes. I do recall that there was a sharp drop in desirability of class 2 soils in meeting farming requirements, and that class 3 was rough, stoney and not desirable for cropping. Class 4 was listed as being undesirable for any type of farming.

Silt loam represents 75% of the soils in the wadi association. Samples of south Tihama soils showed a Ph. of 6.7 (slightly acid) to 7.9 (moderately alkaline) or a very desirable range for the majority of crops. Dr. Ferris stresses the fact that water is the limiting factor and not land in the area surveyed. Therefore, the very best land should be picked first for development. However, the selection of a wadi should depend on the water supply since soil and land characteristics of all the wadis surveyed are similar. Dr. Ferris points out that silt loams, sandy loams and fine sandy loams are best suited for agricultural development at this time. He further lists the characteristics of soils suitable for irrigation as follows: (1) high water-holding capacity, (2) reasonable permeability, (3) freedom from harmful concentrations of salts, and (4) adequate supply of plant nutrients. When initiating a detailed soil and land class survey in a particular wadi, Dr. Ferris states that these four characteristics should be constantly kept in mind. The following table shows the importance of land classes in the Asir-Tihama.

Land Class Area (in hectares) in the Asir-Tihama

Class 1	Arable	63,800
Class 2	Arable	71,200
Class 3	Arable	39,230
		<u>174,230</u>
Class 4	Non-Arable	164,310
		<u>338,540</u>

Considerable space has been given in this report to the soil survey since I do not believe it will be printed and released in the near future. It may serve as source material in considering other areas or problems.

I feel that my visit in the Rome office of FAO was worthwhile, not only in the consideration of plans in Saudi Arabia, but very worthwhile in coming to know people who are taking a part in the further development of agriculture and other economic and social matters in the country. FAO officials were most generous and cooperative in making my visit both pleasant and profitable. Such associations, no doubt, will be reflected in the field through cooperation and coordination of programs.

POINT IV

BEIRUT, LEBANON

I arrived in Beirut Tuesday, September 9, 1952. The following morning I checked at the American Legation Office where I talked briefly with Minister Harold B. Minor. From there I went to the Point IV Office building and visited with Dr. A. I. Tannous, Deputy Country Director. Lebanon Point IV work was discussed in general. County Director Peter was in Washington, D. C.

Next I went to the Karame Building which houses the Agricultural Technicians. Dr. Clyde McKee, Chief Agriculturist, talked at length with me concerning the Lebanon agricultural work. Later he introduced me to technicians Laster, Poultry; Rollins, Horticulture; Shaw, Forestry; Turman, Agronomy; McDonald, Extension; Cannon, Animal Husbandry; and Bowman, Marketing. The balance of the day was spent talking with several of these men.

The following day, September 11, I went on a field trip with Mr. Murl McDonald, Extension Specialist. The farming areas southeast of Beirut were visited. The main crops produced here are bananas, olives, citrus fruits, apples, grapes, eggplants and small grain. All farms, except banana, were bench terraced. We also visited an exchange 4-H Club student located at a monastery which conducts a school and farming activities. Mr. McDonald had arranged a spraying demonstration by airplane the following day for olive groves but it was cancelled due to the instability of Government at that time.

The next day was spent on a field trip with Dr. C. Y. Cannon to see about Holstein cows which had been shipped in from Holland. Dr. Cannon went to Holland and selected these animals, 22 bulls and 29 heifers. All are purebred and the bulls are to be placed in agricultural communities for the purpose of serving native red Damascus cows. This project is located in the Bekaa Valley near Riyak. Adequate barn space has been provided by a local district school. A large feeding shed is under construction which will also house a beef cattle project a little later. A 300-ton silo had been dug and was being filled with sorghum and corn.

On Sunday, September 14, I was invited by a representative of the Continental Drilling Company to accompany him on a trip to the Litani River dam site where core drilling was in process. Also, I had the opportunity to see village and farm life in south Bekaa. The dam will provide water for irrigation and hydroelectric power.

Monday, September 15, I made another trip to the Bekaa Valley with Dr. Cannon and Mr. T. J. Egan, Animal Husbandry Advisor, British Middle East Office, to see about purchasing silage corn from native farmers. Native employers are being taught how to feed and care for dairy cows which takes rather constant supervision at the present stage of operations.

September 16, I visited on the campus of the American University of Beirut. President Penrose and Agricultural Dean, S. Edgecome, were on a trip to Turkey. However, I talked with assistants about the proposed new agricultural school. We discussed curricula and the proposed agricultural experiment stations as well as district vocational schools. A new agricultural building is now under construction and a visit to it was made. Apparently it will be quite adequate for the present. I also was shown through the new engineering building. Construction is excellent. In the afternoon I visited with Dr. H. J. Ferris of UNESCO. He is the soils specialist who had just completed the soils survey in south Tihama-Asir, Saudi Arabia. Having read his report in the Rome FAO office, I felt that our visit was quite profitable to me.

The next day, September 17, I accompanied Dr. Bowman, Market Specialist, and Mr. George Prince, Credit Consultant, to the Bekaa Valley to witness a demonstration of harvesting potatoes with a potato digger and tractor. The soil was too dry and hard to provide a successful demonstration. The demonstration was in charge of Dr. Gilbert Turman, Agronomist. Following this event, we went to see a milk distributor at Riyak concerning the possibility of organizing a farmer Cooperative for dairyman. The present Cooperative law needs rewriting to provide the essentials of a sound Cooperative. The milk distributor, Mr. Feldmahn, reviewed the production and marketing of milk in that area. He stated that peak production comes in May each year and the average production per cow is approximately 2000 lb. The average number of cows per dairyman is slightly less than two. As a distributor, a farmer Cooperative would affect his business considerably.

While in Beirut, I visited with Dr. Richard Farnsworth, Point IV Chief of Education. Emphasis is being placed at present on teacher training. Curricula are being constructed and staff recruitment and training are now in process. Vocational education will receive much attention. Obtaining qualified instructors is one of the present major difficulties.

I also visited with Dr. Eugene Gillis, Chief of Health and Sanitation, and his counterpart, Dr. Joseph Debbas. Efforts are being made, on a community basis, to establish health and sanitary measures through a health center. Ways and means of providing sanitary conditions and the prevention of diseases will receive major emphasis. Dr. Debbas has had experience in Saudi Arabia, in the employment of a commercial firm, and knows the many problems of health with which Point IV workers will be confronted.

At noon of the same day I attended the Beirut Rotary Club luncheon where I had the privilege of meeting quite a number of the leading business and professional men of the city. Economic problems as well as the then shifting of government personnel were the main topics of conversation.

Saturday, September 20, I met with Mr. T. E. Shaw, Forestry Specialist; to discuss work in his area. Having come over so recently and with the upheaval in government, there had been little opportunity to get started. A project area has been tentatively selected and a project agreement is in process. The previous week, Mr. Shaw got permission to harvest some tree seeds and a few seeds were harvested.

The afternoon was spent with Dr. V. V. Bowman in visiting with a Mr. Duncan, Beirut Purchasing Agent for ARAMCO. We learned of the inauguration of refrigerated shipments of fruits and vegetables by boat by ARAMCO from the Mediterranean area to Dhahran. The shipments will be semi-monthly down the Red Sea and up the Persian Gulf. This service will provide marketing opportunities to fruit and vegetable growers of the Mediterranean area hitherto not available. The visit was made to ARAMCO as a result of discussions Dr. Bowman and I had concerning the increasing of marketing outlets for growers in Lebanon and Saudi Arabia. At present, Saudi Arabia could use more of the Lebanon products and an outlet for any Saudi Arabian surplus will be of importance as its economy develops.

September 23, was spent indoors because of the curfew imposed throughout Lebanon.

Wednesday, September 24, I accompanied Dr. Bowman and Mr. Prince to Abadien, a village in the mountains where considerable fruit is grown, to visit the first and only farmer Cooperative in Lebanon. It was established in 1936. The Manager, Mr. Faud Najjar, met with us and explained its process of operation. From a marketing viewpoint the Cooperative is little more than an assembly point for the sale of their fruits in the city of Beirut. Fruits are delivered to the Cooperative building on the backs of donkeys, in crates recommended by the Cooperative. The Cooperative trucks deliver the fruits and vegetables to wholesalers in the Beirut market and accounts are kept for Cooperative members.

The Cooperative also has a retail store which stocks produce of various kinds to be sold to members and others. Sale prices are in line with local village store prices but the Cooperative has forced the local merchants to a reasonable price level. Loans are made to members at the same interest rate (10%) the Cooperative must pay to commercial banks for the money. Membership in the Cooperative now stands at about 200. This is a case where Point IV can possibly help arrange loans at a lower interest rate and in an amount which will make production more profitable to the member.

On September 25, accompanied by Mr. W. E. Hamilton, Assistant General Manager, Dr. V. V. Bowman and Mr. Prince, I visited S. J. Sheikh Abdullah the owner of the farm at Daman. He seemed interested in discussing Point IV and the farm problems of his district. Next we visited S. J. Sheikh Abdullah the owner. He was interested in pointing out the needs of agriculture which included drainage, fertilizers, machinery, new crops, crop rotation, and assistance in livestock production. He stated that his farm was losing money. He also called attention to the difficulty of keeping adequate farm labor because so many farm workers have been employed by ARAMCO. I pointed out briefly the impact of industrialization on any agricultural area. Sheikh

DHAHRAN, SAUDI ARABIA
(Al Hasa Province)

I arrived in Dhahran about mid-morning of September 25, via a special Middle Eastern Airway plane which had been chartered for a Beirut to Dhahran flight by the Arabian American Oil Company. This permitted me to arrive several days earlier than otherwise possible. Mr. Edward Betzig, Acting Program Officer of Point IV, and ARAMCO officials were present and accompanied me into the city. After lunch, I talked with Mr. W. E. Palmer and Mr. W. Burleigh, Assistant Directors of Government Relations. The balance of the afternoon was spent in the company of Mr. Palmer visiting areas of Dhahran and ARAMCO installations.

The following day, September 26, ARAMCO furnished a car and driver for Mr. Betzig and me to visit Dhahran environs including some farming areas. At the same time, the U. S. Consul General, Mr. Max Bishop, was making arrangements for me on the following day to visit H.H. Amir Saud Ibn Abdullah Ibn Jiluwi, Governor of Al Hasa; H. H. Amir Abdul Muksin Ibn Abdulla Ibn Jiluwi, of the Dammam District; and H. E. Sheikh Abdullah Ibn Adwan, Superintendent, Office of the Ministry of Finance of Dammam.

The next day, September 27, Mr. Bishop, Mr. Betzig, Mr. Mahmood, the interpreter, and I were furnished a plane by ARAMCO to fly to Hofuf to visit the above named Governor of Al Hasa. We discussed the Point IV program and the agricultural needs of his province which included drainage, soil fertility, irrigation, crop and animal diseases, more prolific crops and the training of natives in such work. World affairs in general were also discussed. The Amir had us to lunch, a description of which would require considerable space. I considered the visit friendly and very worthwhile for later programming.

September 28, Mr. J. G. Hamilton, Agricultural Consultant for ARAMCO, provided transportation and accompanied Mr. Betzig and me to a farm south-east of Dhahran which is owned by Hamal Bin Essa Dossay. This farm was in the middle of a sand desert but watered by a large spring and artesian well. The farm produces dates, alfalfa, some sugar cane, a few citrus trees, goats, sheep and some milk cows and calves. The water table is near the surface (12 to 15 inches) and is the major farm problem for all farmers near the Persian Gulf. Before leaving, coffee was served, followed by dates, tea and coffee again.

Following the above visit, we were taken to the Qatif area to observe farming there. The area has an estimated population of 40,000 to 60,000. Farms here produce about the same crop and livestock enterprises as listed for the above farm. High water table is a major problem.

September 29, accompanied by Mr. W. G. Hackler, Assistant Consul General; Mr. J. D. Hamilton and Mr. Betzig, I visited H.H. Amir Abdul Muksin Ibn Abdulla Ibn Jiluwi at Dammam. He seemed interested in discussing Point IV and the farm problems of his district. Next we visited H.E. Sheikh Abdullah Ibn Adwan. He was interested in pointing out the needs of agriculture which included drainage, fertilizers, machinery, new crops, crop rotation, and assistance in livestock production. He stated that his farm was losing money. He also called attention to the difficulty of keeping adequate farm labor because so many farm workers have been employed by ARAMCO. I pointed out briefly the impact of industrialization on any agricultural area. Sheikh

Ibn Jiluwi further stated that many surveys had been made and many reports had been submitted to SAG with recommendations but there had been no action.

That afternoon ARAMCO provided transportation for a return trip to Hofuf to study its agriculture. Messers. Hamilton, Betsig and Hussein Bodawi, Agricultural Inspector of the Royal Farm of Dammam accompanied me. We had dinner and sleeping quarters at an ARAMCO construction camp near Hofuf where we arrived late in the evening. The next morning it was necessary to visit again with H. H. Amir Saud Ibn Abdullah Ibn Jiluwi, Governor of Al Hasa, to obtain his permission to visit village farms and study agriculture of the Hofuf. The Amir again appeared to be interested and asked a number of questions concerning agriculture, new crops, fertilizers, drainage and water. The Amir then assigned Ibrahim El Geyhimam, Lawyer of Finance, who is in charge of all government palms in the province of Al Hasa, to be our guide.

First we visited an experiment station started by SAG several years ago. American technicians had been employed to conduct the stations. Considerable expense had been made in constructing buildings for housing technicians and laborers, ditching the land, equipment for pumping water and setting young date palms. I understood that vegetables had been grown. Unfortunately the experiment station had been abandoned about two years ago. It is now a sad looking situation. With no water supply, most of the young palms are dead and the buildings are in a very bad state of repair. It was Americans who led in starting the experiment station and unfortunately America is now blamed for its failure. Point IV must not let something like this happen. I have no recommendation at present regarding the possible rejuvenation of the station. Possibly it could be used in the future as a site for the beginning of a school.

Next we visited several springs and the farm of Abdullah Ibn Shekail to observe crops and livestock as well as soil and drainage conditions. Dates, rice, cucumbers, alfalfa, squash and some citrus were being grown. We noted that rice and other stubble had been burned to provide fertilizer (ashes) for the soil. The common rotation followed was rice, onions and wheat. We then went to the village of Om Sabasa (7 Springs) and visited the farm of Mohamed El Mehana. For about two hours we walked and studied conditions. The crops were mostly dates, alfalfa, cucumbers, squash and some rice. Water, which came principally from a well, appeared to be adequate. Some citrus was grown but of a poor quality and the trees had much scale. While walking over this farm about a dozen village men accompanied us with about two dozen children following. Upon returning to our car at the village about 300 natives had congregated to see us and say hello. Mohamed El Mehana then invited us into his home for coffee, tea, and then coffee. Through an interpreter I explained, to him and about 20 of his guests, the Point IV program and rehearsed agricultural conditions as we had observed them. Some questions were asked and the meeting was very friendly. By that time it was very late in the afternoon and we returned to Dhahran.

Wednesday, October 1, Mr. Hamilton, Mr. Betzig, the interpreter and I drove to several sites along the Gulf in the Dammam and Qatif area to observe points where it might be possible to lower the water table of adjoining farms by installing tide gates. We also visited the Royal Gardens owned by the Minister of Finance. There we observed much work being done to bring in new land by the digging of ditches. The farm grows a large variety of plants and has a large dairy herd as well as sheep and chickens. Too much is being spent for the apparent productive income. A soils expert and a drainage engineer could be used very profitably in this Eastern area.

The following day we visited the village of Ghedien, a part of Qatif. Abdullah Bin Nasra Alla, Chief of the village and religious leader of Qatif, conducted us over his garden or farm. Dates predominated as usual, but other crops such as alfalfa, cucumbers, squash, melons and some citrus were growing. The water table is too high to produce citrus fruit. Water was supplied by spring and drilled well. The village chief had made plans for us to lunch with him so this took much of our time but permitted us to discuss agricultural problems and the Point IV program.

Friday, October 3, (Moslem Sabbath), was spent with Mr. Hamilton and Mr. Betzig in visiting several date groves and investigating water table levels. Though all farming in the coastal area is by irrigation, proximity to the Gulf causes a high water table and there is much salt in the soil and water.

H.H. Abdul Miskin Ibn Abdullah Ibn Jiluwi and H.E. Sheikh Abdullah Ibn Adwan were visited again Saturday morning, October 4th. This visit was for the purpose of reporting the results of our visits in the Dammam district. The foregoing has given the reader the nature of such a report. There was again the opportunity to develop friendship and talk about the Point IV Mission as well as some of the difficulties we experience in recruiting personnel to leave the U.S. and come to work with farmers of Saudi Arabia. At noon, I was invited to lunch with Mr. Noel Sargent, a representative of the American Manufacturers Association, who is now visiting certain Middle Eastern countries. He was interested in the Saudi Arabian Point IV program. The same day we visited the ARAMCO hospital where its activities were shown and explained by Dr. Alexander and Mr. Palmer. This hospital is rendering a most valuable service to its employees and natives of the surrounding area. Out-patients number approximately 500 per day. The hospital is equipped with the most modern equipment. A new addition to the hospital is being constructed to render further services. These services are without cost to the recipient.

The following day I had the opportunity to see ARAMCO's educational program in action. An effort is being made by the Company to teach native Saudis to perform all company operational activities from the simplest jobs to those of administration. The schooling begins with learning to read and speak English and continues up through the various vocational operations. Several years of training are required for responsible jobs. In talking with staff members who are responsible for pre-job and on-the-job training, it was clearly brought out that many employees have become interested in education for their children. Areas near Dhahran may provide opportunity for Point IV education programs.

ARAMCO's Research Division, Government Relations Department, in charge of Mr. George Rentz was visited. Agricultural files are bare now, but much fine work is being done to provide information about the Arabs and their countries.

While in Dhahran, Mr. Betzig and I had the privilege of visiting with Mr. L. M. Snyder, Vice President in charge of Company Management for ARAMCO.

AL KHARJ FARMS

The next day, October 6, was spent in traveling by railway to Al Kharj where farms are operated to supply produce to Riyadh, the capital of Saudi Arabia. The entire operation consists of three farms with a total acreage of approximately 3000. Farm Al Qasr is just south of farm headquarters with an acreage of 1000. Dates constitute the main crop with a variety of other crops such as alfalfa, millet, truck and garden. This farm is irrigated by three large springs, the water being lifted approximately 70 feet by pump. These springs provide 12,300 gallons of water per minute.

Farm Al Bijidiyah consists of 900 acres and is just north of farm headquarters. Similar crops are grown except date palms are fewer in number. The dairy herd of about 60 cows and heifers (Jersey and Brown Swiss) and the poultry flocks (2000 birds) are kept here. Several head of Santa Gerturdis cows and bulls have been purchased for production purposes. Milk, eggs, poultry and crop produce are shipped daily to Riyadh.

Farm Al Khafr Daghran is located about 35 miles south of farm headquarters with an acreage of about 1100. This farm is located in a large wadi and is used for the production of alfalfa, sudan grass, and many kinds of truck crops. Many horses of the Royal stables are kept here as well as native cattle and camels. Camels are used for hauling the alfalfa, cut by hand, to where it is picked up by trucks or fed to the livestock.

These farms are managed by personnel recruited mostly in the United States and operated with local labor. ARAMCO has general supervision of these farms. Mr. Brookheir is General Manager and he was most generous with his time by accompanying us over the farms and explaining their operation. Here we learned many of the problems entailed in Saudi Arabian irrigation farming.

The next morning Mr. Betzig and I were picked up by an ARAMCO plane and carried to Jidda. The plane was on a business flight to that city.

Agriculture

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

MEMORANDUM

February 11, 1953

TO: Mr. John A. Dunaway
Acting U. S. Director

FROM: Edward Betzig
Acting Program Officer

RE: Thoughts on Saudi Arabian Agricultural Program

In order to formulate a long-range program of agricultural development in Saudi Arabia, it might be well to review studies and proposals for programs in other underdeveloped countries. While problems are not parallel, one discovers that certain elements appear in most countries of this type. This being the case, the Saudi Arabian picture can be analyzed against the background of common problems.

Agriculture in such countries is characterized to a greater or lesser degree by the following conditions:

1. An illiterate and poorly educated rural populace,
2. A life of cultural isolation and self perpetuating poverty,
3. Lack of modern health and sanitation facilities,
4. No or poor credit, marketing, transportation services,
5. Although economy is based on agriculture, only small sums are expended on agricultural development and the Agriculture Department and consequently the latter is very weak,
6. No or inadequate extension service and hence need for facilities to train extension agents and get them into the field,
7. No or inadequate research - experiment stations, need for facilities to train personnel, carry on work,
8. Low productivity, together with a high percentage of the people living on the land,
9. Inadequate or no means to provide for better hand tools, seed, plant varieties livestock, new crops, disease and insect control, fertilizer, etc.,
10. Lack of means of combatting the frequent misuse of the land - overgrazing, erosion, etc.

11. Inadequate means to bring new lands into productive use.,
12. Wasteful and inefficient use of water supplies,
13. Need for development of irrigation work, discovery of new water sources, etc.,
14. Poor drainage conditions,
15. Need for soil classification and analysis.

Obviously, each country, being unique in the variety of its problems, requires separate analysis which results in distinct program proposals. However, with the above list of characteristic conditions in mind, certain proposals are common in most countries.

It should be noted here, before proceeding further in the analysis, that Point Four does not pretend to offer the means for remaking a country's agriculture. The magnitude of the task precludes it. Furthermore, each country should view the matter as one of long range effort with most of the cost coming from its own treasury. Point Four can work in a number of fields and by stimulating and guiding, help the country to develop healthy conditions. Unfortunately, it is infrequent that a country is aware of the seriousness of the problem or of the time, effort, money, trained personnel, etc., required to get lasting results. The very fact that these agricultural countries lack effective Agriculture Departments with strong extension and research organization is proof enough of the lack of interest shown in the past by the governments. This frame of mind is not easily overcome. Especially dangerous is the disillusion which follows the failure of expensive and grandiose projects. Such merely confirms, in the government's mind, the futility of trying to do something for agriculture.

Most proposals emphasize the following:

- a) Strengthened Department of Agriculture and the improvement of its organization and administration, increase of its budget and its staffing with qualified professional persons.
- b) Effective extension and research groups whose personnel can bring and demonstrate to the small and medium farmer knowledge of better tools, seeds, plants, animals, crop protection, fertilizers, etc.
- c) Rural schools, agricultural training centers, health clinics, etc.
- d) Improved credit, marketing and transportation facilities.
- e) Projects to improve land and water use, to develop new land and water resources, to make soil studies, to carry out drainage works, etc.

Saudi Arabia, in general, is afflicted with all of the ills noted in points one to fifteen. In addition the nature of her climate severely limits the sections where agriculture may be carried on. Grazing ranges are far larger but are also of varying utility depending on the uncertain rainfall. To date, SAG has done little to demonstrate a realization of the magnitude of the job confronting improving local agriculture. The Department of Agriculture is poorly financed, has a non-professional director, a small staff and apparently no sound plan for future work and growth. Extension services and research are practically nil. No training center of any type exists. To date, the farmer is left almost wholly to his own inadequate devices with the natural result being rural poverty and low productivity.

To boost Saudi Arabian agricultural production and the productivity of the farmer and herdsman, it is obvious SAG must make a determined effort involving a greatly increased budget, development according to a carefully conceived plan and a well organized, professional Agricultural Department with effective extension and research services. This will not be easy.

There would appear to be three points to be stressed:

1. An expanded and improved agriculture department.

(a) This would have an Extension Division to train and recruit personnel. It would mean the establishment of an agricultural school to provide such personnel. For the next few years, it would be necessary to send qualified persons abroad to study until such time as the school was functioning. Some could be trained by Point Four personnel.

(b) Demonstration farms to test seeds, fertilizer, etc., and to carry on practical and simple research.

(c) Some credit institution or a separate Agriculture Bank. This might be left as a last step, although it is a basic need. Also a method whereby farmers would get financial reward for adopting new techniques - as cheap fertilizer, crop insurance, etc.

2. Efforts to increase farm-grazing productivity through the established Extension Service. Until agents could be trained locally, foreign technicians would have to be recruited. Functions would be to bring improved tools and draft animals, teach soil building, use of fertilizer, of forage crops, better seeds and varieties, livestock improvement, control of plant disease, insect pests, etc. Such efforts take great amounts of time, effort and patience; however, should be viewed as education carried on over the course of years.

3. Only a tiny percentage of Saudi Arabia is now under cultivation. If production is to be increased in any real sense, new land must be brought under cultivation and old land improved. This would involve such type projects as:

(a) Classification of soils to determine best use of land "Agricultural Stations" and what land is potentially cultivable.

(b) Drainage studies and works (Hasa would appear to be a logical area and such work might make for a fairly large increase in productivity.)

(c) Water storage and irrigation works - Stress here is on economic use of water so as to have a safe maximum for irrigated land.

In addition, rural education and transportation facilities need to be improved.

WHAT CAN POINT FOUR DO

1. Have positive view towards Saudi Arabian agricultural position but avoid easy optimism. Government must be made to realize unfavorable local conditions; primitive state of agriculture; need to expend large sums if a more productive agriculture is to result. The need to develop a technically competent agriculture department should be stressed.
2. Develop plan to creast Extension Service. This is perhaps the most difficult task. Extension Services are notoriously deficient in most underdeveloped countries and personnel hard to obtain. To show SAG government the results to be obtained from an Extension Service, one or two places should be so staffed by Point Four in hopes that three-five years of field work will show SAG what an Extension Service can do. Projects could be carried out at El Darb or Abha or Hofuf.
3. Work towards establishment of Agriculture School.
4. Stimulate SAG into carrying out land improvement and new land development projects. Point Four could perhaps carry out pilot demonstration projects such as:
 - Drainage - Hofuf - Qatif
 - Water Use - Kharj
 - Old and New Land - Darb - Using both new well water and floods.
5. Urge Government to undertake specific projects such as date variety, spacing, etc. - Hofuf, Qatif; Rice Culture - Hofuf, Qatif; Range Animal Improvement.

It is obvious that the Department of Agriculture needs a greatly expanded budget if it is to carry out these proposals even on limited scale. Tothill's proposals in his recently issued book ought to be taken into consideration. No attempt will here be made for an agriculture budget but it would appear necessary for it to be at least 12,000,000 to 15,000,000 Saudi Riyals.

It is recommended that the Minister of Finance, Deputy Finance Minister and Director General of Agriculture, be presented with a broad proposal such as is outlined above. It appears to me that the Director General's approach of "Agricultural Stations" is not a sound one. I do not believe that we ought to give aid and comfort to it. In a sense, Point Four is in the most interesting position of being able to suggest the direction that Saudi Arabian agriculture can take in the years to come. Anything we can do to help SAG draw up a budget with a long range program in view will increase the possibility of lasting good resulting.

Agriculture

February 9, 1953

CONFIDENTIAL

Technical Cooperation

Administration,

American Embassy,

Jidda, Saudi Arabia

Dear Dr. Taggart:

This letter is a general presentation of (1) the present working environment, (2) a few things that have been done, and (3) an attempt at looking ahead in programming for the Point 4 Division of Agriculture in Saudi Arabia. It is not to be construed as a criticism of anyone or group. It is merely for your information so that OFAR (USDA) may know some of the problems, accomplishments, and plans attendant to establishing an agricultural improvement program in this country.

Working Environment: The Kingdom of Saudi Arabia's Department of Agriculture is located in the Ministry of Finance and is headed by a man apparently of considerable means. Upon arrival in Jidda, I was informed by the Country Director, the Program Director and the Government Liaison Officer that the Director of the Department of Agriculture (1) has little knowledge of technical agriculture, (2) is a person interested primarily in what he can make financially out of the office, (3) cannot be trusted and will attempt to wreck the TCA Program if he cannot use it for his own purpose and (4) has wasted funds allotted to his Department.

I was further informed that all planning and negotiations pertaining to Point 4 work in agriculture must be done through the Finance Minister. This appears to be the only logical alternative at present. However, the Finance Minister is greatly burdened with details of government and resides practically all of the time in Riyadh, which is hundreds of miles from Jidda, and to which you go only by invitation.

The Government-TCA Liaison Officer is a good man and is quite interested in seeing that TCA is successful, and that agriculture in the country is improved and developed along sound lines. He worked formerly in the Department of Agriculture and is amenable to the Deputy Finance Minister who appointed the present Director of the Department of Agriculture. This Liaison Officer also has cautioned me about having any dealings with the Director of Agriculture.

The above
Development Projects was made effective, in which Saudi Arabia and
Dr. Glen L. Taggart, Chief,
Office of Foreign Agricultural Relations, TCB,
U. S. Department of Agriculture,
Washington 25, D.C.

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The above is a conservative statement of parts of the present situation. This may be a common occurrence in other foreign assignments, and you may have some helpful suggestions to make. However, I shall be working within the framework of general TCA policy, local TCA policy established by the Country Director, and in the light of what appears appropriate diplomacy and good judgment.

In December last, the first Project Agreement was negotiated by the former Country Director - the so-called community package program. This project has for its scene of action one of the most remote, primitive, and difficult-to-reach communities in Saudi Arabia. It has relatively high potential for increasing agricultural production provided adequate water for irrigation can be supplied.

Accomplishments: What has been accomplished thus far has been set forth in activity, or monthly, reports which you have received. By way of review, some accomplishments are herewith listed.

1. Visits by Chief of Agriculture Division to important farming areas.
2. Contacts with province, village and central Government officials.
3. Tentative plans for a community development program at El Darb.
4. Collecting materials for agricultural specialists.
5. A suggested long term country program in agriculture for Saudi Arabia.
6. Agreement for the Technical Cooperation program in agriculture with signatures November 10, 1952.
7. Project Agreement for rural community development projects with signatures December 18, 1952. Note: These Agreements were formulated and negotiated by the Country Director and Ambassador.

Technical agricultural accomplishments will become evident when technicians have arrived and entered upon active work.

Looking: When the project agreement for "Rural Community Development Projects" was made effective, in which Wadis Itwad and Khulais were designated for development, I had not returned as yet from a trip to inspect Wadi Itwad and its major village, El Darb, relative to development and agricultural improvement possibilities. The entire second page of my activity report for November and December, 1952, deals with Wadis Itwad and El Darb.

However,

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However, upon my return I began giving consideration to plans for improvement in Wadi Itwad. A suggested plan for TCA and SAG to initiate a community improvement program in the Wadi Itwad area was submitted which dealt with determining (1) improvement needs of the community, (2) basic factors essential to the development of a community improvement program, and (3) a procedure for initiating a community improvement program. A breakdown was suggested for each of the above three determinations which incorporated opinions based on my observations in the Itwad area.

The Country Director and Program Director have been kept informed regarding plans for an agricultural program in Saudi Arabia, as well as personnel needs. Recently at the request of the Director of Agriculture, I submitted a general plan Point 4 expects to follow in an agricultural improvement program for Saudi Arabia. The following sets forth this general plan which was transmitted via the Finance Minister's office:

a. In cooperation with the Saudi Arabian Government, select rural communities, or areas, in which to initiate programs of agricultural improvement.

b. Station Point 4 agricultural technicians and their Saudi Arabian counterparts in areas selected for agricultural improvement. Their objective will be to advise with and teach present and prospective farmers improved farming methods, thereby increasing production and raising the standard of living. Point 4 technicians will supervise and be responsible for all work undertaken, but will be assisted by their Saudi Arabian counterparts.

c. In addition to technicians stationed in the various areas, Point 4 proposes to recruit a staff of specialists in the fields of agronomy (crops), animal industry, soils, entomology, horticulture and farm irrigation. These specialists will be responsible for providing guidance and assistance in each area program by being responsible for planning and supervising needed research, demonstrations, and other specific action programs for the purpose of improving farm practices pertaining to crops, livestock, insect pests and diseases, irrigation and land development. The Saudi Arabian Government will be expected to furnish counterparts to work with the specialists so that later they will be able to conduct such work without the aid of Point 4 technicians. The work of all specialists will be in cooperation with the technicians stationed in the areas.

d. An experimental and demonstration plot of land will be established in appropriate areas where a modest program of experimentation will be conducted to determine the more desirable types and varieties of crops for farmers in the respective areas. Also this plot of land will be used for appropriate agricultural demonstrations. The local or central Government will be expected to provide the small acreage of land required for such plots.

e. Since

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e. Since agricultural improvement programs will be a joint and cooperative effort by the SAG and Point 4, equipment and materials necessary to the effectiveness of Point 4 technicians' work in the various areas will be supplied by the Saudi Arabian Government and Point 4 according to provisions of project agreements, which will be effected to meet the needs of designated communities, areas, or specific action programs.

f. In addition to this community, or area, approach to the improvement of agriculture in Saudi Arabia, it is the purpose of Point 4:

(1) To foster the improvement of Governmental services to agricultural producers by assisting in the development of a strong Department of Agriculture which will place increased emphasis on agricultural research and extension work.

(2) To develop greater confidence on the part of farmers of Saudi Arabia in the services which their Government will provide.

(3) Furnish technical assistance to the Government in establishing on-job training for farmers in major farm enterprises, and in organizing elementary agriculture instruction.

(4) To encourage the development of new farm lands where sufficient water is available, and where such development appears economically feasible.

(5) To provide technical assistance to the Government in the development of a farm marketing program.

It is my opinion that the Agriculture Division should have a going program of work in several communities, or areas, within the next 12 months. It will be necessary to have a minimum of one agricultural extension technician stationed in each community, or area, along with his counterpart. As the work develops junior agriculturists can be used to assist the stationed technicians. The functions of the specialists (research and extension) are set forth in "c" of the above general plan. When they visit a given area at appropriate times, they will stay a week, month or longer if needed to accomplish established objectives. Their going will not be just social visits to inspect. The future will determine how many of these men will be needed. At present, a specialist for each agricultural field is needed as set forth above in "c" of the general plan.

I should also like to emphasize that every man sent here must be one of successful experience and one with desert farming experience if possible. Men to be stationed in given communities, or areas, should be without families, especially children, and be willing to work out doors in backward and underdeveloped areas. If there is just a wife, and

they

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they are willing to be separated several months at a time, that would be satisfactory. Also, it would be better if specialists without children could be recruited because of no local educational facilities.

This is rather a long communication, however, it is my feeling that the above information will assist you in understanding the present situation. It is also my feeling that much can be done here to improve production standards by making technical assistance available to farmers, and by assisting the Government to organize a strong Department of Agriculture which will provide research, extension work and vocational agriculture schools.

Sincerely yours,

William J. Edens, Chief
Agriculture Division

JAS
JADunaway
TCA:WJEdens:pm

CONFIDENTIAL

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 18, 1953

MEMORANDUM

TO: Dr. W. J. Edens, Chief, Agriculture Division

FROM: Thomas J. Moon, Ext. Specialist Irrigation Farming

SUBJECT: Crops seeded for Adaptation on Soil with excessive Salt
Concentration on Kilo 41 Government Exp. Station near Jidda

Realizing it is late to seed crops with the hot summer months near, I deem it advisable to gain some knowledge in regard to observations of different crops seeded now on this salty soil. The soil is practically all medium to coarse sand with no silt and no humus, with some large stones. The larger stones were removed by hand and three tons of manure plowed in on 1/2 acre area by oxen. The rows were put up by hoe by hand in 3 ft. widths. All crops were seeded in the 12" furrows with a single row hand planet Jr. seeder, the second day after the plot had been irrigated. Then the following day all crops were irrigated on top of the seeded rows in the furrows.

The following crops were seeded on May 16.

Three 6 ft. rows cantaloupes (Var. Tex. M.R. No. 1).

Three 6 ft. rows cantaloupes (Var. Smith's perfect).

Six rows tomatoes (Var. Rutgers) interplanted between cantaloupe rows.

Twelve rows soybeans (Var. Woodsyellow) in 3 ft. rows.

Eight rows peanuts (Var. Va. Runner) in 6 ft. rows.

Ten rows grain sorghum (Var. Atlas) in 3 ft. rows.

The above-mentioned crops were seeded at Hadda Shan exactly one month earlier on a different type soil.

TJM:oon:o

MEMORANDUM

April 20, 1953

TO: Dr. W. J. Edens
Chief, Agriculture Division, TCA/Saudi Arabia

FROM: Thomas J. Moon
Agriculture Division, TCA/Saudi Arabia

SUBJECT: Report on Hadda Sham Demonstration

I visited the Experimental Station operated by the Agriculture Department in November 1952. A second visit was made in March 1953, and I observed that the station had been abandoned with the exception of the date and citrus plots. Mr. Badcock, Horticulturist with the Minister of Agriculture, suggested I try seeding a small area with various kinds of vegetables.

Dr. Edens, Mr. Badcock, Mr. Sadek Hussein, and myself, visited the station again in April 1953. Immediately following, a conference was held with the Minister of Agriculture and he agreed that a trial seeding at the station would be satisfactory. After two more conferences, I obtained fertilizer, insecticides, and a small hand duster from the Minister, as our requisition from the United States in September 1952 had not been received. We agreed to seed one-half acre to different kinds of vegetables which we had in stock.

Upon my arrival at the station on April 14th, I decided to seed only 105 ft. by 105 ft. plot due to the lack of a level (which was also in my original requisition) to check the slope of the area to be irrigated. The plot selected is sandy loam with very little humus. My first operation was to spread 3,900 pounds of sheep manure over the entire area. I estimated the manure had only one-fourth its normal value as fertilizer. The 8 inch walking turning plow was attached to the yolk of the oxen with a tow chain, and the entire area was broken 12 inches deep. Then the plot was partially leveled by the use of a palm trunk ridden by the worker and dragged three times over the entire area with the pair of oxen. The dual wheel hoe was used to mark the rows. Then the Georgia stock with a 6 inch solid sweep was used to make the furrows for irrigation, after seeding with the Planet Jr. seeder single row.

Furrow irrigation was used. The rows were seeded in the north and south direction. The tomatoes were seeded on the east side of the ridge at the water level in the furrow. Higher ridges were plowed up with the turning plow to insure shade after 2:00 P.M. each day for the small tomato seedlings. Atlas grain sorghum was interplanted with the tomatoes to insure shade at fruiting time.

The following kinds of seeds were seeded: peanuts (Virginia Runner), soy beans (Wood's Yellow), grain sorghum (Atlas), tomatoes (Rutgers), cantaloupes (Smith's Perfect, and Texas M.R. No. 1).

TCA/SA
TJMoon:djh

ARABIAN AMERICAN OIL COMPANY
A CORPORATION
DHAHRAN
SAUDI ARABIA

T. C. BARGER
GENERAL MANAGER
CONCESSION AFFAIRS

April 13, 1952

Dear Ray:

I have been pushing the boys on the report of the Al Kharj Agricultural Project and have finally gotten the attached out of them. I am not too happy with the results so if there are any unanswered questions or more details you would like to know, please feel free to call on me.

Sincerely,

Tom Barger

Attachment

2 Copies to Dr. Shotton.

Note.

2 COPIES

ag - reports of other SA representatives Mission

April 7, 1952

REPORT ON AL KHARJ AGRICULTURAL PROJECT

The following is a brief history of the operations of the Saudi Arab Government Al Kharj Agricultural Project for the years 1938 through 1951 and an analysis of the production and cost figures for the years 1948 through 1951.

INTRODUCTION:

The Al Kharj Agricultural Project consists of approximately 3,000 acres of cultivated land under irrigation located about 55 miles southeast of Riyadh.

X The project is divided into three farm units; Al Kharj Farms, Bijidiyah and Khafs Dughara which is located about 32 miles south of the other two farms. Water is supplied from 'Ain Dhila' for the Al Kharj Farms and Bijidiyah, and from ~~the~~ Khafs Dughara for the Khafs Dughara Farm.

The pumping installation at 'Ain Dhila' consists of four D-13,000 Caterpillar engines driving four 3 stage, deep well turbine pumps. The installation at 'Ain Khafs Dughara' consists of three D-13,000 Caterpillar engines driving 3 Ingersoll Rand Horizontal Centrifugal 12" pumps. The water from 'Ain Dhila' flows through approximately 56,000 feet of main irrigation canal before reaching Bijidiyah.

BRIEF HISTORY:

1938: The Minister of Finance of Saudi Arabia, Shaikh 'Abdullah Sulaiman, inspected the great pits at Al Kharj with company geologists Bramkamp, Hoag and Barger.

X 1939: The first ~~Iraqi~~ Scientific Mission under Dr. Ahmad Susa made a survey of the area and submitted a report to the Government. In September the second ~~Iraqi~~ Mission arrived with the necessary men and equipment to start agricultural operations. The equipment consisted largely of used diesel engines and low lift centrifugal pumps of British manufacture which were installed in 'Ain Semha.

1941: Bramkamp, Snyder and Barger of Aramco made a geological and engineering survey and submitted a report to the Saudi Arab Government on the feasibility of expanding the agricultural area.

1942: The Egyptian Agricultural Mission replaced the ~~Iraqi~~ Mission in the operation of the project. A Hungarian or Swiss engineer named Staphani (Stefani), reported to be an employee of a French construction company of North Africa, constructed an elaborate pumping installation at Khafs Dughara during the years 1942-45. Company engineer A. Perry made a topographical survey and maps of the Al Kharj area.

1943: Company engineers and surveyors supervised the laying-out and construction of the new canal from 'Ain Dhila' to Raudha Bijidiyah, installed and maintained engines and pumps at 'Ain Semha, and explored the location for the 'Ain Dhila' pump installation. The Egyptian Mission departed and the Company provided the men necessary to replace them.

1944: Considerable difficulty was experienced in procuring the equipment necessary for the 'Ain Dhila' pumping installation which necessitated changing the plans to accommodate the type of engines available. The Foreign Economic Administration and the Middle East Supply Center sent a mission, consisting of Coneybear, Skillbeck and Meyers, to survey the food supply and transportation requirements of Saudi Arabia. At the request of the Government, the Mission submitted a special report concerning the operation of the Project and assisted in obtaining deep well pumps to install in 'Ain Dhila'. In December the F.E.A. Agricultural Mission arrived and relieved Aramco of the operation of the Project.

1945: In January the 'Ain Dhila' pumping installation was completed and started operating. The 'Ain Semha installation was then abandoned. The following trees were planted during the year; date trees, 2,955; windbreak trees (athel) 195,000; woodlot (athel nursery) 100,000; fig trees 1,000; pomegranate trees 2,000; mulberry trees 1,000; grape rootings 50; and citrus trees 100.

1946: In May the F.E.A. Agricultural Mission departed and the Company provided the personnel necessary to continue operations. In December K. J. Edwards arrived to manage the project as a special Aramco employee responsible to the Government for the operation of the project with the understanding that he would become an employee of whatever U. S. Mission replaced the F.E.A. Mission.

1947: In January the personnel employed by Edwards arrived as special Aramco employees and Aramco was relieved of direct responsibility for the operation of the project.

1948: Part of the Edwards group resigned. Aramco requested U. S. State Department and Department of Agriculture to send out experts to make a survey of the situation. Aramco engineer C. R. Macfarlane made a complete survey, including area surveys, mapping, water draw-down, and flow tests, and plant and equipment inventory, and submitted a report (Nov. Dec. 1948 - Jan. 1949).

1949: The Company began supplying the Riyals for the local payroll. Dr. D. D. Crary made a survey and submitted a report to the Government. Dr. H. V. Geib made a survey and submitted a report. Twitchell submitted a report concerning the Crary report. Farouki and Palestinian agricultural arrived with no specific operational authority or responsibility. The poultry project plan was started.

1950: On January 1st Aramco, at the request of the Saudi Government, assumed complete authority and responsibility from Edwards for the operation of the Project with instruction to produce as much foodstuff as possible without regard to experimental or demonstration aspects. The Palestinian group remained at Al Kharj in charge of a small demonstrational and experimental plot supposedly under the direction of both Edwards and Farouki. Edwards departed and Farouki assumed complete authority of the demonstration farm. The poultry project started.

1951: During February the permanent pumping installation at Khafs Dughara was completed. During July the Farouki group departed and Aramco absorbed the experimental plot into the general project. Plans for an animal-husbandry and dairy project were started. The railroad arrived at Al Kharj.

The above historical outline gives an indication of the changes in administration and policy that have occurred at the Project during the years mentioned. Although the production of agricultural produce for the Royal Family in Riyadh has been the primary purpose of the project, at times other purposes such as demonstration, experimentation, outside agricultural and mechanical work, or even recreation have taken priority over production. This appears to have been true especially during 1948 and 1949, and to a certain extent even now. It is difficult to estimate the value of these activities as either unlisted income or as costs to the Project in materials used, labor and equipment used, or in decreased production. However, it is possible that in some years the cost of these activities accounted for as much as 20% of the cost of operation of the project and at the same time caused a decrease in production of 20%. Since 1950 the project has been operated largely as a commercial farm on a production basis with a consequent increase in production and decrease in unit cost of production.

The production and cost of operation figures are affected by several natural factors. For example, during different years, there have occurred severe frosts, floods, extreme heat, strong winds, locust swarms, and other insects and plant diseases. Also such factors as fluctuations in cost of equipment, export controls and materials unavailability, transportation conditions, world economic conditions and dollar shortages, and fluctuations in wages and prices paid for agricultural produce in the Riyadh market tend to distort costs and production figures for one year as compared to other years. For these reasons statistics in the following section contain total weight of production as well as costs and income figures.

SUMMARY OF COST, INCOME AND PRODUCTION FOR 1948 THROUGH 1951

	Approximate Food & Feed Crop Production In Pounds	Approximate Income of Total Production Based on Riyadh Prices in Saudi Riyals	Approximate Costs Based On Aramco Billings in Saudi Riyals	Approximate Net Income in Saudi Riyals
1948	19,209,099	3,443,098.	* 3,502,911	(59,813)
1949	15,975,815	2,287,573.	* 2,940,901	(653,328)
1950	21,791,126	4,200,120.	2,506,858	1,693,262
1951	34,313,483	6,045,615.	2,849,907	3,195,708

*Includes Saudi Riyals supplied by the Government for normal

The 1951 production consisted of the following produce:

	<u>POUNDS</u>
ANIMAL FODDER CROPS: Alfalfa & Green Feed	28,701,252.
GRAINS: Wheat, Oats, Barley & Maize	506,215.
VEGETABLES: Eggplant, Tomatoes, Okra, Pepper & Beans	1,907,640.
VEGETABLES: Radish, Beets, Turnips, Onions, Carrots & Peanuts	769,268.
VEGETABLES: Cabbage, Lettuce, Cauliflower, Broccoli, etc.	42,126.
MELONS: Watermelons, Honeydews, Cantalope, Cassaba, Kherbiz, Jrawah, Pumpkins, Squash & Cucumbers	2,947,935.
FRUIT: Dates, Pomegranates, Grapes, Mulberry & Apples	250,446.

Also produced but not included in the pounds total above were the following:

ATHEL TIMBERS (Each)	2,898
JAREED (Each)	64,000
DATE TREE FIBER (Waznas)	2,840
ROPE (Feet)	1,400
CHICKENS (Each)	1,786
EGGS (Each)	17,259

The above figures indicate that production has increased considerably since 1948 with a maximum total production in both pounds and Saudi Riyals being shown for the year 1951. The production figures for the year 1951 give an indication of the variety of crops that can be produced. This variety of crops is the result of previous years of experimentation for the different crops and it is reasonable to suppose that additional knowledge will be gained in the future which will allow for increased production as the more productive varieties are determined. The major crop in both pounds and Saudi Riyals value is animal fodder, and in pounds, melons is the second most important, vegetable third, grains fourth and fruit fifth.

1951 was the first year that the poultry project has shown any production and in the future years poultry products may increase in importance in income for the project. Also during 1951 plans were made for a live-stock and dairy project to start in 1952.

JRCM:WE/rs

Jidda, Saudi Arabia

June 28, 1953

MEMORANDUM

TO: G. W. Ferguson, Chief, Health and Sanitation Division

FROM: John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

SUBJECT: Shifting of Budget Items

I have your memo of June 22 on the above subject and offer the following comment:

I think you are unduly disturbed over what I said in regard to shifting from one activity to another. I was not attempting to define any fixed plan or procedure for such shifting, but was merely expressing the opinion that this would be permissible in FY-54 as it has been in FY-53. Please note confidential airgram of June 1, Control 93.

I think your contention that one of the serious handicaps to your work this year is that you were not allowed to operate on the budget needs some comment.

In the first place, the Public Health Division did not have a "budget" in the proper sense of the word. There was instead a program authorization for the TCA/SA which was issued on October 7, 1952, and arrived on the field toward the end of October. The amounts shown for health were based on estimates made many months prior to the date of issue and before your arrival. The authorization for Health and Sanitation was as follows:

Technicians	4		\$33,000
Trainees	3		22,000
Supplies & Equipment			14,000
Field Costs			<u>11,000</u>
Total			\$70,000

Before your arrival and before there could be any active health program a revision of the general agreement necessitated increased expenses for rent, furniture, utilities, automotive vehicles, etc. Not only was TCA required to provide housing, etc. for the staff then on the field, but for the members being recruited. No addition was

made to the funds authorized, hence the only possible way to provide for these expenses was from savings of the program as a whole. It was impossible to determine just how much of such expenditures came from any particular service or activity; there was therefore no occasion to secure the opinion or approval of any particular division chief before securing the housing, transportation, etc. Almost all commitments for these things had been made before I took over as Acting Director. Even had it been possible to allocate the whole \$70,000 to your division, there would have been no possibility of considering projects such as the Quarantine Station and the Maternity Center projects, totalling \$102,500. When these were under consideration you certainly did not object to the attempt to finance them from general savings, which we thought were available, even though the amount was more than your so-called budget.

Now I note with great interest your protest in advance of any shifting of funds from your division except on conditions you lay down. While I am reasonably sure that whoever is responsible for the direction of Point Four at the time any such shifting is necessary will take into account the views and opinions of all division chiefs affected, I think you go too far in asserting that such shifting can not be done from your division except by your approval. I would remind you that TCA does not consist of eight or ten separate divisions each acting independently but it is instead a coordinated program in which at all times the success of the whole venture must be the prime consideration. It is, as I see it, the duty of the direction to deploy the available resources from time to time as seems most likely to further the general objectives of TCA, even though this may not meet the approval of some of the division chiefs. Acting on this principle I recommended several of your projects regardless of the fact they were not provided for in the authorization for your division.

It is, of course, the hope of all of us that after TCA gets over its initial stage, it will be possible to forecast the financial needs of the several phases of the work with sufficient precision so that a division chief may proceed with his planned program with assurance so long as it is kept within the allotment. It is obvious that TCA/SA has not as yet reached this desirable stage and our budget request for the next fiscal year may not turn out to be even a good guess as to how much should be spent on the several phases of the work. Certainly the budget request submitted to Congress by TCA/W is further still from meeting programs as planned.

JADunaway:o

Jidda, Saudi Arabia

June 22, 1953

MEMORANDUM

TO: John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: G. W. Ferguson, Chief, Health and Sanitation
Division

SUBJECT: The Shifting of Budget Items among Divisions

Your memo dated June 21, 1953, in which it was agreed that there is reason to believe that budget items within a division may be shifted and that the retention of Mr. Ghazzawi by the Division of Health and Sanitation is desirable, is appreciated. Your memo was in answer to one of mine dated June 20, 1953, regarding Mr. Ghazzawi.

There was a very disturbing statement in your memo; namely - that with a limited budget it might be necessary to shift items from one division to another. No mention was made about first receiving the agreement of the Division Chiefs concerned. If it is planned to make these budget item changes after consultation with the Division Chiefs and with their agreement, I concur with the idea providing TCA/W approves. If not, I wish to be on record here and now as strongly objecting to such an idea. One of the serious handicaps of our division this fiscal year has been that it was not allowed to operate on the budget. This mistake must not be made next year if the Mission is to succeed at all.

cc: Mr. Bodie

GW Ferguson:o

7102
*Comments
on
Budget.*

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

CONFIDENTIAL

June 4, 1953

OFFICIAL-INFORMAL

Dear Sir:

As per our telegram of June 1, 1953, I am enclosing copies of memoranda from the Chiefs of all Divisions except Public Administration. Most of these touch upon the larger question of the FY-54 budget as a whole, as well as the needs of the particular division. I do not concur in all the estimates but I forward them as written in order that you may have a chance to know the type of thinking and state of mind of the men responsible for planning and implementing Point 4 during the coming year.

I will offer at a later date more specific observations on the points in the several memos with which I am in disagreement, particularly in the case of the memos from the Chiefs of Education and Transportation Divisions. In the meantime if we are unable to secure any funds except the one million dollar allotment, please refer to recommendations in my letter of May 10 in regard to these Divisions.

With personal regards.

Sincerely yours,

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

5 Encls - Memoranda fr Division
Chiefs re FY-54 Budget

Mr. E. Reeseman Fryer,
Assistant Administrator, NEADS,
Technical Cooperation Administration,
Department of State,
Washington 25, D. C.

CONFIDENTIAL

JADunaway:djh

CONFIDENTIAL

File 2

Comments
on
Budget.

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

MEMORANDUM

June 2, 1953

TO: Mr. John A. Dunaway, Acting Country Director

FROM: Glen F. Brown, Chief, Natural Resources Division

SUBJECT: TCA/Washington Proposed Budget for 1954

The proposed budget of \$95,000 for Natural Resources, a reduction of 11%, is insufficient to attempt to carry out the requests of the Saudi Arabian Government for technical aid in the development of water, metallic and non-metallic deposits, and to carry on the geographic and geologic mapping needed for agricultural development and road location. The omission of a provision for supplies and equipment eliminates the chemical analysis of water. The quality of water is probably the most vital control for any development in this desert. This omission also eliminates much needed transportation facilities for field work. Four of the power wagons which we now have are well worn after three years use and will need extensive repair, if not replacement, if we attempt to take them into the desert again. The failure to provide funds for backstopping for the Geological Survey in Washington also eliminates preparation of maps in Arabic for the use of SAC, paleontologic, geochemical, petrographic analyses, library facilities, and most important of all, the advice and guidance of probably the best staff of specialists in the Natural Resources field that might be available to TCA.

With our advice and guidance, the Saudi Arabian Government is currently spending about one million dollars a year in a drilling program to develop ground water. This program is now operating effectively enough to require the study of large numbers of samples of well cuttings and of water, to confer frequently with the Water Resources Division of SAC so that wells are properly located and constructed, and to map and study the occurrence of ground water so that safe yield is not exceeded.

A large and extensive iron-bearing formation, recently discovered in northern Arabia, as well as other deposits, some of which will doubtless be of economic importance to the Kingdom, require study if we are to advise SAC effectively in the development of these deposits.

We have worked out a method of preparing adequate maps basic for all development by using aerial photographs and astral positions for orientation and scale. Even though this method requires only a fraction of man

CONFIDENTIAL

(Memo fr Glen F. Brown, dtd June 2, 1953, re TCA/W Proposed Budget for 1954)

hours needed for other methods of surveying, geologists must spend many hours at night making astronomical observations in addition to other duties. Calculations must be made and checked before mosaics are prepared.

The violent and intermittent nature of desert floods requires the full time of a hydrologic engineer if we have any hope of advising SAG on flood control, dam construction, surface water conservation, and water spreading.

Thus the current staff is overworked and extended to the point where efficiency is materially decreased.

Acting on the advice of Ambassador Hare and Acting Country Director Dunaway, we are omitting a study of preparation of recommendations for legal control of water within the structure of Moslem law.

I believe that the request for four additional personnel is modest and in line with housing problems. If SAG adequately finances a large water development program throughout Saudi Arabia as requested by the Crown Prince and the Finance Minister, we shall need a minimum of ten additional technicians in addition to the above. These additional personnel are a chemist, two sub-surface geologists, two radio operators, an administrative assistant, and eight geologists to carry on areal mapping ahead of the drills. The work requires a budget of \$603,662, of which \$195,000 is supplies, and equipment, including fuel and local repairs of transportation equipment.

I believe that assisting SAG with their wish of increasing food and water is basic to any other Point Four activities in this country.

With reference to the telegram of May 17, Point 1A, the Saudi Government is relying on us for technical advice in a water-development program, alone costing them about one million dollars each year, or ten times the cost of current technical assistance. This refutes the charge of "SAG's relative slowness in accepting Point Four for what it is, namely technicians and supplies for demonstration purposes only". As far as I know, there is no faster method of acceptance.

With reference to Point 1B that "SAG has relative aversion to affording opportunity to Point Four to work within a government structure set up to absorb and profit from this type of aid", it may be true that SAG has no well-organized departments; yet we are receiving close cooperation from the SAG Department of Mines and Water Resources Division of the Department of Public Works, both under the Finance Minister who carries out instructions from the King and the Crown Prince. They have requested an expanded water-development program throughout the country aimed at settling the nomadic population with the additional hope of agricultural development. This program involves expenditures on the order of 3 million dollars per year exclusive of construction costs for warehouses, main-

(Memo fr Glen F. Brown, dtd June 2, 1953, re TCA/W Proposed Budget for 1954)

tenance shops, etc. by SAC, for which they need technical direction costing about one-sixth that amount. Doubtless SAC will spend much more in developing other natural resources without any increase on our part.

Thus two of the three reasons are invalid for the Geological Survey work and the third reason, that the program is now before Congressional committees, seems strange in view of the presentation of this program by mail to TCA/Washington on April 11, referring to Departmental telegram of April 22 stating that "TCA/NEADS needs additional information to strengthen presentation and defense of 1954 programs before Congress next month."

Comments on Budget

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

RESTRICTED

June 1, 1953

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: Dr. Robert D. Dolley, Chief, Education Division

RE: 1954 Budget

I have carefully studied the contents of the cable from Washington setting forth considerations of that office in determining the budget of \$1,000,000 for the Mission in Saudi Arabia. Without further comment concerning the manner in which this budget has been presented and its paralyzing effect upon those of us responsible for creditable representation of the United States and its productive leadership ability, I should like to beg your indulgence with the following thoughts as they have occurred to me in reading this communication.

1. SAG's financial situation has changed little if any prior to or since the Point Four program came into the country. This condition must have been known at the time the basic agreement was signed. To refer now to this point as an argument or as justification for the lack of need for cooperative support could well be considered under these circumstances as a breach of faith if not a contract.

A. In the case of Education, this deduction is either predicated on the wrong information or the lack of it. They have accepted both and within the limitations imposed by Point Four have accepted all that has been offered. The problem in this connection cannot be considered exclusively SAG's.

B. Again, the aversion in the case of Education seems to rest more with Point Four than with SAG. After all we would not be here if there were not a few problems; on the other hand, the educational services are held immobile for one reason or another by Point Four, not SAG. SAG has asked for assistance many times, affording opportunities for assistance and collaborative and cooperative effort.

C. This should not preclude a realistic acknowledgement of a belated expression of need based upon investments and efforts in the development of the program thus far.

RESTRICTED

(Memo re 1954 Budget, from Dr. Dolley)

2. TCA in Saudi Arabia is not asking for alms. What is necessary in the way of justification required for the allocation of sufficient funds with which to carry out the terms of our agreement with SAG?

A. Technical assistance without funds is like having an automobile without gasoline. Only through proving the value of technical assistance, through practical application of it in the way of demonstrations, can this program go forward. Their background for modern innovation is less than 15 years old. Under these conditions, little else can be expected. More technicians under these conditions will contribute to more unhappiness and a wider lack of understanding. Hence to consider this serious problem on a chance basis and as it might be considered elsewhere is inviting disaster, the responsibility for which cannot under these conditions be considered anything but our own.

B. Technical assistance cannot be separated from any capital assistance without serious damage to the investments already made in technical training and assistance and reducing the objectives of Point Four to that of a financial grab bag. Further, without training and technical aid the investments in capital outlay, either of the direct grant type or in physical development, will be so completely dissipated as to render our efforts as a nation a complete and absolute liability in the course of a few years. To pursue such a course is to apply the easiest current expedient to the solution of a major international problem without regard for the consequences.

3. There still seems the desire to apply a rule to the statement contained in our telegram 88, without any consideration for the conditions prevalent in the country. Technical assistance in a land without the first concept of modern development, or hardly the basis for beginning, cannot use any more technical assistance than is needed to demonstrate what they are trying to do, and the facilities available with which to do the demonstrating. Hence the necessity for some operational funds, not just funds for salaries - salaries without the other means is approaching the subject blindly and without regard to the purpose of being in the country.

4. A. Saudi Arabia cannot comparatively be considered with any other country in the Arab world. Its contacts with the outside world have been limited to less than 15 years. In the case of Education, their proposed monetary contributions have been equitable in the light of their understanding, and they otherwise have contributed upwards of \$70,000 in support of the cooperative training program. This should not be discounted. On the other hand, it deserves encouragement.

B. This reference seems irrelevant in view of the objectives of our efforts.

(Memo re 1954 Budget, from Dr. Dolley)

C. The technical assistance program for Israel we agree seems out of line.

D. The problems of Saudi Arabia should not be considered competitively, but if they should be, then they must be based on need in which event it must be considered no comparison can be made between Jordan, Lebanon and Saudi Arabia.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

RESTRICTED

June 1, 1953

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: Dr. Robert D. Dolley, Chief, Education Division

RE: Education - 1954 Budget

Conservative estimates of funds needed by the educational mission to capitalize upon current opportunities for educational development and advancement in Saudi Arabia growing from interest in training activities this year, and in addition to present tentative provisions, is \$250,000, plus seven average salaried technicians. This assumes that \$18,100 is available for support in the budget item of Program Direction.

These funds, in addition to those presently suggested in the proposed budget, will lead to the expenditure of from between \$684,000 and \$1,500,000 by the host government in the prosecution of cooperative projects during the next biennium, and within a short time thereafter many times more this investment in similar public school development.

Four projects have been written calling for contributions from TCA of \$190,000 and four technicians. All these projects have their setting in Jidda. One provides for nation-wide trainee selection. In view of the impending necessity for cooperative projects in the central and eastern parts of Arabia, \$60,000 has been estimated for use in this connection, making a total of \$250,000. Two additional technicians are estimated necessary in connection with the expenditure of \$60,000 for projects in other parts of Arabia, and one general one to assist in extension type training for adults, not considered in the suggested '54 budget but already requested. This makes up the total of seven technicians needed to carry out the minimum program expedient and essential at this time.

Basic host contributions for this expenditure amount to \$123,000, with provisions for estimated contributions that equal \$561,000 in the way of construction and that will probably far exceed this amount in three to four years.

Nothing has been considered in these estimates for community projects. It is assumed that provision for education has been made or will be made in the organization and prosecution of such overall undertakings. The figure of \$18,100 to come from Program Direction or Administration, whichever,

(Memo re Education - 1954 Budget, from Dr. Dolley)

provides for visual aids, film, local assistants such as translators and projectionists, travel, instructional materials and supplies.

In reviewing the '54 estimates of budgeted proposed expenditures which you gave me the other day, I found the following detail: Technicians 3 at a cost of \$60,000, training awards 33 at a cost of \$135,000, no local employees, no supplies, equipment or other costs.

These estimates are alright as far as they go but they don't go far enough. It can't be assumed that this proposal satisfies the importance of our mission in Arabia or the situation and conditions as we must face them with our host government. Nor can we assume that this proposal is sufficient to justify our previous efforts and investments. These estimates as a final conclusion are just not capable of making our position here tenable, much less profitably significant.

To secure results in education, as well as in other areas of technical growth, the program of development must be by demonstration, example and results. To understand and to think abstractly in terms of modern day living is many times beyond the capacity of even the most enlightened Arabians, steeped with the traditionally living each day as it comes about. As they see the operation and profit by the results, they are fast to accept and support modern ways on far-reaching undertakings. Therefore in educational endeavor, funds must be available for TCA educational demonstration services and with the acceptance of a minimum of joint financial contribution from the Saudi Arabian Government. The opportunities under such conditions in Saudi Arabia, where virtually only Americans are known to the people, are unlimited.

I feel that the increasing willingness on the part of the Government to contribute financially to our training programs is a strong indication that expansion of the services is absolutely essential now. To shut off all opportunity in this direction at this time, as the proposed budget dictates, means the closing of the Commercial School, refusing to assist in the proper organization of the Industrial School, or anything else except the processing of trainee grant applications.

Although the matter of financing this TCA mission in Arabia is not my direct concern, adequate financial support in conformity with the objectives of our educational division within the limitations of good judgment, is of vital importance to me in the proper discharge of my duties. In this connection, I do not feel that the explanation of justification of this budget you have presented me with, as outlined in the Department's cable, can be accepted as being adequate or justifiable.

As pointed out in my written comments to you on the observations contained in this message, Saudi Arabia cannot be placed in a comparative status with other near and middle eastern countries; to do so is to shut

(Memo re Education - 1954 Budget, from Dr. Dolley)

one's eyes to reality, the purposes and objectives of TCA, and the opportunities in this country. The filtration of machinery and modern means of living started to trickle into this nation only a few years ago, possibly less than 15 years all told. The vast majority know nothing about things modern now. Most of them are completely without conception of other people and other nations. Under such conditions, the approach to the solution of educational problems cannot be that of the neighboring countries whose cities and markets have for centuries served as the crossroads of Europe and the East.

To send technicians to Arabia, as is presently anticipated in the proposed budget, would not only be an absolute waste of money but would also serve to increase the problems of the Mission. The people of this land have not reached the place where advice alone can be used properly or even followed under most circumstances. To send technicians to Arabia for this purpose alone is pure folly. To send them to this country without the funds or means of working is to invite trouble and loss of prestige in the eyes of our host peoples.

Projects and a program of action have been drawn for educational development and activity--funds with which to implement this program of action must be provided. I feel confident if our Washington colleagues understood the full significance of our position in this land, and the great advantage of opportunities that is ours, by way of comparison with so many neighboring countries who have the complex of having already accomplished much, they would find some way and means of securing necessary financial support to implement an action program.

To this end may I urge that they be made fully aware of our financial needs in education and the strategic importance of action now.

Summary of Funds Needed

Projects #1	Commercial School, Jidda	\$58,000
#2	AUB Scholarship Contract	36,000
#3	Aircraft on-the-Job Training	36,000
#4	Jidda Industrial School	60,000
#5	Central & Eastern Arabia, Open	60,000
Technicians: Project #1 - 1; Project #2 - 0; Project #3 - 2;		
Project #4 - 2; Admin. - 2.		
Administration - visual aids, films, local assistance, translators, projectionists, travel, instructional materials and supplies - - - - -		\$18,100
Host contributions estimated current- - - - -		\$123,000
Provision for continued host contributions that equal		\$561,000.

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 31, 1953

MEMORANDUM

TO: John A. Dunaway, Acting U.S. Director of Technical Cooperation in Saudi Arabia

FROM: Gerald W. Ferguson, Chief, Health & Sanitation Division

SUBJECT: Proposed Cable re Health Division Budget FY-54

"Budget for Health Division sent Washington included

\$128,388 - American personnel
11,800 - Local
135,000 - Supplies and equipment
\$275,188 - Total

In addition, 7 trainees c. \$28,000.

At present, four project agreements ready for approval and signature -

1. Quarantine Station	\$100,000
2. Immunization Program including laboratory	85,000
3. MCH Clinic	2,500
4. Rural Sanitation Program	10,000
Total	<u>\$197,500</u>

\$100,000 to come from FY-53. In addition, discussions have been carried on concerning establishing public health center - Riyadh, estimated cost \$37,500, making total budget FY-54 for supplies and equipment \$135,000.

Acting in good faith in accordance with Health Program Agreement signed Dec. 15, 1952, at Jidda, we drew up above project agreements calling for supplies and equipment in the amount requested in our budget. TCA/W proposed '54 budget repudiates Health Program agreement and all project agreements under discussion. It is imperative that TCA assume its moral responsibilities.

Administration of program handicapped by our having to rely on SAG for service personnel. Absolutely necessary Mission have funds to hire interpreters, etc.

Justification and accomplishments listed in Health Division budget FY-54 by TCA/W have little semblance to actual facts."

cc: TCA/W
Public Health Service

GWFerguson:c

May 28, 1953

Comments
on
54 Budget

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

MEMORANDUM

May 28, 1953

TO: John A. Dunaway

Acting U. S. Director

FROM: E. F. Sinclair

Chief, Transportation and Communication Division

RE: Telegram from Washington May 15, relative to our
FY/54 Budget.

As we are all aware, the Budget in its present condition based on Washington estimates, gives us practically no leeway whatever in carrying out any kind of projects for the year 1954.

Insofar as this Division is concerned the Saudi Government should be given technical assistance in the following matters:

1. Planning and setting up a centralized Public Works Department for the handling of all Government construction work, maintenance, etc., throughout the country. This is a project for a technician to come over here for a period of at least one year for the purpose of assisting the Government in putting into operation such a Department. Such a project would also entail sending certain trainees to the U.S. for the purpose of learning first hand just how such a department functions, placing such trainees with the Public Works Administration in Washington or with a State Public Works Department.

2. There is need for technical assistance to the Saudi Government in the building of good durable highways which is the prime factor in building up their transportation needs. An experienced highway engineer could come over here for a stipulated period and advise and assist the Government in the matter of studying available materials and the peculiar problems of building the best and cheapest kind of highways, etc., in a climate such as they have here. This could be a project whereby engineer trainees could go to the U.S. for the purpose of learning just how this type of construction work is carried on there. This technician could also advise with respect to ground improvements which are sadly needed at the various airports.

May 28, 1953

3. A project covering a complete engineering survey by an outside engineering company covering improvements at Yenbo Harbor.

It is an absolute waste of Saudi money to construct a railroad into Yenbo unless they intend to make some improvements in the harbor. It is estimated that such a survey would cost approximately \$50,000 and I feel that a very large portion of this amount could be obtained from the balance which it is expected will be left in the present railway survey contract. I have also been informed that the Crown Prince is now in favor of making some kind of improvement to this harbor and am certain that if we could go along with such a project, it would help in placing TCA in a much better position in the eyes of the Government that we are at the present time.

The cost of the improvements necessary to make the harbor at Yenbo serviceable would be approximately \$150,000 to \$200,000 but this is an expenditure which the Saudi Government would have to handle.

4. Technical assistance in establishing the best and cheapest kind of communication which would link together the whole country. For this purpose, an engineer could come over for a certain length of time for the purpose of advising and setting up plans for the best type of system; which no doubt, due to the large expanse of waste country, should be a radio communication system.

The above projects, I feel, are all necessary in building up the economic standard of this country and are in line with the program of assistance outlined under TCA.

The telegram in question speaks only in generalities and does not set down in any manner specific reasons why our Budget as submitted was reduced. Under the circumstances, I feel that we are entitled to know the reasons for such a reduction in our proposed budget in order that we have the opportunity of giving to Washington additional data further justifying our Budget of \$2,063,000.

Mr. Dunaway

May 28, 1953

Below is concise portion of proposed telegram for this Division, unless you care to elaborate further.

Transportation and Communication Division has a possibility of four projects of vital importance to SAG involving three technicians and one outside contract for approximately \$50,000. none of which can be accomplished under present setup 1954 budget.

TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

MEMORANDUM

May 28, 1953

TO: John A. Dunaway, Acting U. S. Director of Technical Cooperation
in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

RE: FY-54 Budget

The proposed FY-54 budget by TCA/W is less than 50 per cent of the modest request made by the Country Director last fall. Not only is this budget inadequate for a minimum program, but it is unrealistic. It provides only for limited personnel and training awards and nothing for supplies, equipment, field travel and maintenance.

The proposed amount of personnel does not allow for a balanced technical staff in the basic phases of agriculture essential to (1) determining rural community improvement needs, (2) developing project plans based on these needs, and (3) providing minimum research leadership for a strong, progressive and continuous agricultural program. Nor does the budget provide for a reasonable number of extension workers which is absolutely essential to initiating agricultural community, or area, programs.

Since the proposed budget does not provide funds for operating equipment, supplies, field travel and maintenance, which are sizeable costs in any rural development program, personnel sent to the Mission will be immobilized and have no demonstration, experimental and other instruction aids with which to make their technical abilities effective.

If the Agriculture Division is called on to reduce the presently insufficient personnel in order to provide working tools, the Division might as well give up its community development plan for improving agriculture in Saudi Arabia and resort to the only alternative, which would be using the resources provided by the budget to make surveys and studies in further preparation for a constructive program of improvement. It is my opinion this would be most obnoxious to the host government.

If it is the purpose of TCA/W to string along and conduct a weak, half-baked agricultural improvement program in Saudi Arabia, it would be to the advantage of both governments for the agricultural phase of the Mission to be withdrawn. Therefore, I suggest that the FY-54 budget be strongly protested. In fact, the problems confronting this Mission should be presented directly across the table to those who are in a position to take corrective action.

WJ:0

A budget for the Agriculture Division for FY-54 was submitted upon request January 14, 1953, which set forth a very modest budget when considering the problem of determining and initiating an agricultural improvement program in a country approximating the size of the U.S. east of the Mississippi River. By way of review, I am herewith setting forth the budget items slightly modified since January 14 due to a reduced per diem for travel and the addition of a Range Conservation and Management Specialist.

Minimum Budget Requirements for FY-54

Agriculture Division

1. Administration and program direction

1 Chief Agriculturist \$16,428

2. Basic technical personnel for survey and determination of community development projects, conducting research, planning programs and carrying them into effect

WJH:daw Agronomist (crops)	\$17,312.	
Animal Husbandman	17,312	
Soils Specialist	17,312	
Horticulturist	17,312	
Irrigation Engineer	17,312	
Entomologist	<u>17,312</u>	\$103,872

3. Additional personnel required to initiate agricultural improvement work in given communities will be one extension specialist to be stationed in each community. Assuming that work will be started in a minimum of 5 communities during FY-54 -

5 Extension Specialists \$13,545 67,725
(One specialist is on hand)

4. Special project personnel in process of recruitment -

5. Travel (Field principally)		
Per diem	\$15,320	
Transportation	<u>5,500</u>	\$ 20,820
6. Vehicles for 5 community development program		25,200
7. Equipment and supplies for 5 community development programs		37,700

SUMMARY

Personnel	\$215,193
Travel	20,820
Vehicles	25,200
Equipment and supplies.	<u>37,700</u>
Total	\$298,913

WJEdens:o

CONFIDENTIAL

*Comments on
Budget*

Sent Dept. 898 from Jidda.

June 1, 1953

TOTEC

Urtel 641 argument and reasoning would do nothing toward reducing SAG resentment against disparity overall aid compared with other mideast countries. Following comment on certain points:

1-A. SAG slowness realizing that Point 4 is confined only to technicians and supplies for demonstration inevitable in view of well advertised millions direct financial aid in addition to technical in Egypt, Iran, Lebanon, Israel and other mideast countries. However budget FY-54 fails to provide supplies even for demonstration and hence renders TCA ineffective in education, health, agriculture, natural resources and transportation.

1-B. Allegation as to SAG aversion to afford opportunity TCA work within governmental structure designed to profit from this type aid not clear. SAG has certainly profited from advice public finance and natural resources and shows eagerness to do so in other fields. If you mean general backwardness governmental affairs point has validity but this condition well-known and should have been taken into account when SAG persuaded to accept expanded program. Failure to implement this expanded program cannot properly be blamed entirely on SAG. In fact, it was to remedy this general type of backwardness that TCA program designed.

2. Possibility for not ruling out additional program not sufficiently definite for intelligent planning.

4-A. Comparison SAG with other operating budgets prima facie evidence aid based on considerations other than need, comparative population, general level of culture and inherent difficulties. Comparison omits additional grants for direct economic aid and special projects Israel, Iran, Egypt and other countries. Reference Venezuela meaningless to SAG which always and quite understandably draws comparisons with reference neighboring states.

4-C. Is inconsistent with 1 and would confuse SAG. Further argument on theoretical grounds apparently useless, but from practical standpoint the situation as seen from here is that effective program of scope envisaged by agreements cannot be carried out on basis of proposed budget. Sending airmail views of division chiefs on minimum needs. Except for

CONFIDENTIAL

What we need is allocation of a definite sum from MSA funds commensurate with Saudi needs strategic importance and sufficient to implement effectively planned program and to take care special projects in keeping with TCA objectives. We would thus have bargaining power and room for maneuver. This would eliminate long delays and uncertainty in negotiating additional grants since merits only of projects would need consideration and approval. Reason to believe top level State and MSA officials recently visiting SA understand situation and will give sympathetic consideration. Therefore urge soonest presentation.

HARE

JADunaway/RAHare/wbg

CONFIDENTIAL

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 24, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division

RE: Proposed Budget Allotments for Fiscal 54

It appears that TCA/W used its own discretion in determining the way the \$1,000,000 budget for FY-54 should be used. And as you know, no provision was made for supplies, equipment and other costs necessary for field travel and accommodations for technicians. Without these items a constructive technical assistance program, which embodies projects planned and executed, is impossible.

TCA/W knows from past experience that a certain number of personnel in any country program is very essential, and it is my opinion the Washington Office hesitates to do what it hopes the Country Director and his staff will do; and that is to assume the responsibility of suggesting ways and means of reducing personnel for which TCA/W has proposed budgeted funds whereby some funds would be released to provide demonstration supplies, equipment, etc. It is my further opinion that TCA/W should be requested to suggest the type of technical assistance program it thinks should be planned and implemented within the allocation provisions of the present budget it has proposed for fiscal 54.

I should like to see you forward a cable to TCA/W which would include, in essence, the following:

Since proposed FY-54 SAG technical assistance program budget of one million dollars provides only personnel and educational grant aid for the technical divisions, please advise how technical assistance will be rendered without funds for demonstration equipment, supplies, and field travel and housing.

By making this specific request of TCA/W, it might stimulate an effort to discover some over-all budget funds to provide us with supplies, equipment, field travel and housing, and other costs.

You may want to include some statement about projects that have been initiated and what will happen to them without reasonable support.

WJEdens:o

cc: Mr. Stacy

J-2
Budget

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 21, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Dr. W. J. Edens, Chief, Agriculture Division

SUBJECT: Some Thoughts concerning a Reduction of the 1954 Budget
Request as affecting the Agriculture Division that might
be embodied in a Telegram to TCA/W.

The kind and amount of personnel, equipment and supplies requested by the Agriculture Division for FY-54 are the minimum for initiating and conducting an agricultural program of any consequence, as well as possibly meeting the minimum expectation of the Saudis.

Because of the present relatively small country budget and a lack of agricultural technicians to begin operations, the proposed agricultural program for Saudi Arabia is being jeopardized. A reduction in size of the present budget, when programs are being expanded in neighboring countries, would be construed by the Saudis as bad faith and an unfriendly gesture by the U.S., which possibly could lead to non-cooperation or a request that the Mission be reduced to one or two divisions, or be completely withdrawn.

WJEdens:o

~~TCA~~
Budget

RESTRICTED

SecState

May 12, 1953

PRITY 872

RESTRICTED

TOSEC.

NOSEC.

From Division Chiefs Edens, Brown, Dolley, Ferguson, Sinclair.

Do not understand why FY54 estimated budget provides no funds for technical supplies, equipment and field travel. This makes project planning and development untenable. Proposed budget seriously jeopardizes total country program. Clarification of TCA operational policy for SA requested.

HARE

JADunaway
WJEdens:0

RESTRICTED

CONFIDENTIAL

- 2 -

(Ltr. from J.A.Dunaway to E.R.Fryer dtd 5/14/53)

4. Projects

I do not understand the reference to themselves without contributing to the la. If we have any such or have proposed such specific.

6. Criticism

I was in no way upset by the criticism for in fact you are not nearly as useful for the rather sad state we are in. I consider remedial measures.

I believe that unless we can find more projects in addition to the one effort will fail. When and if the project undergo the long drawn out negotiations little money out of MSA funds. The so that all we have to do is to justify grounds of being in line with general interest of the Saudi social and economic development at least.

I had very little opportunity to meet Mr. Stassen but did have an hour. I have no idea whether my presentation was that Mr. Byroade has a good understanding perhaps be sympathetic to our needs.

CONFIDENTIAL

(Ltr. from J.A.Dunaway to E.R.Fryer dtd 5-26-53)

I do not at all mean to suggest that we abandon any part of the well rounded TCA program -- education, health, transportation, agriculture, etc. -- are all important and should be undertaken. But they are all long range propositions. We have undertaken them without due regard to the lack of ability to produce results. What we must have are a few projects which can show immediate and tangible results.

1/24/53
In this connection we have received a request for assistance for the Gizan Harbor installations, an expanded water program, gas-fertilizer plant, none of which can be entertained under present conditions; the Commercial School and the Industrial School projects are not yet assured as is the case with the various projects proposed for public health; we have a definite commitment for Community Development. In addition, two projects have been urged upon us by the representative of the CAB and the Commercial Aviation Attache, stationed at Beirut, for technical assistance in radio-beacons and training of the employees of the Saudi Government Airlines. They are both sound but I had to tell Mr. Thayer they could be considered only after the TCA commitments were adequately taken care of.

I apologize for the length of this letter but there is much more that should be said, particularly in regard to personnel and administration.

Sincerely,

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

JAD
JADunaway:o

See also comments in this letter on Natural Resources Budget.

Confidential

Comments on

FY - 54 Program
& Budget.

FROM FRYER LETTER 4/29/53

By now, you will have our cable about the vital importance of taking steps to assure that funds which are to be jointly administered are actually deposited into joint accounts. The several schools of thought have now merged into a determination that, in carrying out program and project agreements, at such deposit stage funds are recorded here as expended. The co-administration of the activities and disbursement of funds is, of course, a basic tool in assuring full participation by the host government and training in the "know how" of managements as well as planning to nationals of the countries.

As in several of the other countries, it is apparent that there are not in Saudi broad comprehensive programs. This is not particularly disturbing, for in many cases projects when well under way tend to group themselves into programs and actually form the basis for program action. It is, however, disturbing when the projects are ends unto themselves without contributing on a lasting basis to welfare of the Saudis.

The possibility of securing appropriations beyond the planning figures we are now using is too remote to be considered. Our next year's program must be one of technical cooperation which will stand fast under severe scrutiny, both as to purpose and as to detail of planned operation. Before we consider any further underground water use, we must be sure that it is a public service designed to develop water on the desert for the Bedouin.

Enclosed is the condensed statement on the program in Saudi which, with modifications, will be used in justifying the budget request. Additional material has been

requested since this draft was prepared and that is now being assembled. I'd like it if you would personally go over this material and cable me of any changes which you think important to be made.

Note: This enclosure was not given files with the letter. May 31, 1953

TELEGRAM

Foreign Service of the
United States of America

INCOMING

TCA

SECURITY INFORMATION

CONFIDENTIAL

Classification

Date: May 15, 1953

Control: 641

Recd: May 17, 1953

FROM: SECSTATE WASHINGTON

TOTEC

Your 817.

Following concerns proposed FY 54 SAG technical assistance program of US \$1,000,000 including both program direction and program personnel which will be in separate category from FY 54 MSA bill.

1. Department sees virtually no chance of increasing program at present time. SAG's relatively favorable financial appearance is a deterrent but principal obstacles are:

A. SAG's relative slowness in accepting Point 4 for what it is, namely technicians and supplies for demonstration purposes only.

B. SAG's relative aversion to affording opportunity to Point 4 to work within a governmental structure set up to absorb and profit from this type of aid, and

C. Fact that programs now before congressional committee

2. On other hand, for following reasons Department does not rule out possibility of increasing program during fiscal 54:

A. Of \$44,000,000 in technical assistance publicly requested for needs of countries, approximately \$24,000,000 is proposed for Arab states. There is therefore possibility of eventually finding funds for increase in SAG technical assistance program.

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Classification

TELEGRAM

Foreign Service of the
United States of America

INCOMING

CONFIDENTIAL
Classification

Date: May 15, 1953

Control: 641

Recd: May 17, 1953

B. Fiscal 54 request for \$140,000,000 package of special economic aid (over and above Palestine refugee funds) provides not only to be continued special aid to Israel but also for first time for a "limited program of economic aid for capital development" in Arab States and Iran. With new and sharper distinction between technical assistance and capital development (assuming approval of special aid) it can be clearly asserted that financial position of recipient country is more important as standard for budgeting local assistance programs. Strategic considerations however remain pertinent to both.

3. If package for "limited" program of capital development approved along with concept of increased flexibility for executive branch in distribution of such aid, Department will give fullest possible weight to three points advanced Embassy telegram 88, August 6, 1952 in considering distribution of funds.

4. Following points may be useful in your consideration of conversations regarding problem of aid to SAG:

A. While proposed 54 technical assistance program for Iraq is \$2,500,000 or three times SAG figure, Iraq is putting up local currency equivalent of \$16,640,000 and moreover has an American on its development board and has a relatively

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TELEGRAM Foreign Service of the United States of America

INCOMING

SECURITY INFORMATION

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Classification

Date:

Control: 641

Recd:

pronounced social and economic development consciousness.

B. Proposed 54 figure for Venezuela is \$187,000 which is all Venezuela wants.

C. Proposed technical assistance figure for Israeli's \$2,000,000 which is not greatly out of line. In this connection, UK received largest single share of technical assistance funds among Marshall Plan countries although it was neither the poorest nor least developed among them.

D. Jordan and Lebanon figures are \$2,500,000 and \$3,000,000 respectively. Their size compared to SAG figure results from combination of all criteria indicated in Paragraph 1.

5. Department will advise further as discussions here progress and will welcome comment on foregoing.

SMITH

ga

Distribution:

1-Abbey
1-TCA
1-File

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Classification

SECURITY INFORMATION

SecState

April 22, 1953.

PRIORITY

817

RESTRICTED

NOSEC

TOSEC

4/14 - 54 ~~planning figures~~ one billion

Urtel 582. If TCA budget Saudi held to one million drastic changes in program and staffing pattern will be necessary. Otherwise programs agriculture, health, education, transportation which are still in planning stage will be ineffective. Suggest serious consideration be given to attitude SAC which from highest to lowest level increasingly bitter at what they consider meager extent of aid in comparison Iran, Egypt, Jordan, Lebanon and especially Israel.

Until this question clarified request freezing recruitment and assignment personnel already selected.

JADunaway/1

HARE



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

May 24, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: W. J. Edens, Chief, Agriculture Division *WJE*

RE: Proposed Budget Allotments for Fiscal 54

It appears that TCA/W used its own discretion in determining the way the \$1,000,000 budget for FY-54 should be used. And as you know, no provision was made for supplies, equipment and other costs necessary for field travel and accommodations for technicians. Without these items a constructive technical assistance program, which embodies projects planned and executed, is impossible.

TCA/W knows from past experience that a certain number of personnel in any country program is very essential, and it is my opinion the Washington Office hesitates to do what it hopes the Country Director and his staff will do; and that is to assume the responsibility of suggesting ways and means of reducing personnel for which TCA/W has proposed budgeted funds whereby some funds would be released to provide demonstration supplies, equipment, etc. It is my further opinion that TCA/W should be requested to suggest the type of technical assistance program it thinks should be planned and implemented within the allocation provisions of the present budget it has proposed for fiscal 54.

I should like to see you forward a cable to TCA/W which would include, in essence, the following:

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By making this specific request of TCA/W, it might stimulate an effort to discover some over-all budget funds to provide us with supplies, equipment, field travel and housing, and other costs.

You may want to include some statement about projects that have been initiated and what will happen to them without reasonable support.

WJEdens:o



DEPARTMENT OF STATE
TECHNICAL COOPERATION ADMINISTRATION
WASHINGTON

Answered
May 6, 1953.

OFFICIAL-INFORMAL
CONFIDENTIAL

April 29, 1953

Dear John:

During the past two weeks, we have been reviewing each NEADS' country's program. At these sessions, the Country Representative, the functional staffs, Walt Olson, Ernie Maes, and I have attempted to appraise accomplishments or trends and find out which are the strong or weak spots. An incidental result is the specific information about details of the programs which will be helpful in presenting them to the Congress; the more important aspect is the possibility of redirecting or shifting emphasis where appropriate in order to do a better Point 4 job.

By now, you will have our cable about the vital importance of taking steps to assure that funds which are to be jointly administered are actually deposited into joint accounts. The several schools of thought have now merged into a determination that, in carrying out program and project agreements, at such deposit stage funds are recorded here as expended. The co-administration of the activities and disbursement of funds is, of course, a basic tool in assuring full participation by the host government and training in the "know how" of management as well as planning to nationals of the countries.

In looking at the various country programs, we have tried to take full cognizance of differences in types and attitudes of the host government, of availability of trained nationals, and of the relative urgency of various problems which beset the country. After each such meeting, we are writing the Country Director concerned to let him know of the questions which come to mind here on the suitability and effectiveness of the Point 4 approach in that particular country.

It is, of course, no secret or surprise that the technician in Saudi faces extraordinary obstacles in inability to move around freely. I have already written you of the effort being made to get approval of a recruitment policy which will enable us at least to search for Americans who are also Moslem and who speak Arabic. Access to two important centers would break one hurdle in the fields of education and

CONFIDENTIAL

-2-

health. Presumably, the Ambassador will forward his reactions to the people in NE fairly soon.

As in several of the other countries, it is apparent that there are not in Saudi broad comprehensive programs. This is not particularly disturbing, for in many cases projects when well under way tend to group themselves into programs and actually form the basis for program action. It is, however, disturbing when the projects are ends unto themselves without contributing on a lasting basis to welfare of the Saudis.

The possibility of securing appropriations beyond the planning figures we are now using is too remote to be considered. Our next year's program must be one of technical cooperation which will stand fast under severe scrutiny, both as to purpose and as to detail of planned operation. Before we consider any further underground water use, we must be sure that it is a public service designed to develop water on the desert for the Bedouin.

What exactly is the situation on housing in the Asfir? TheI indicates that plans, booklets, etc., have been sent out but has no information on whether construction has actually started. If there is some impediment that we aren't aware of and can help on, let us know. The construction of simple mud houses would be one of the tangible results which have been so helpful in training nationals and for spreading skills and, hence, leading to an acceptance of our motives and willingness to have us participate in other fields.

Will it be possible to So design the quarantine station project that it can later become one facet of a broad health program? If handled as an ad hoc operation, without consideration of its function in a public health program, it will be difficult to define its responsibilities and scope. Would a basic survey to define need and possibilities be in order at this time?

Conversations are going forward here on the plant for aluminum pipe for irrigation (it is not clear here how the company can expect sales in Saudi to justify the cost of a plant but perhaps they have other unmentioned markets in mind); the possibility of a contract with an agricultural and mechanical college to carry out certain phases of the agricultural work is in the talking stage; a meeting is scheduled for this week on fertilizer from flared gases; we shall probably be able to pick up Barr, formerly of DMPA, as a consultant on minerals.

Has any

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-3-

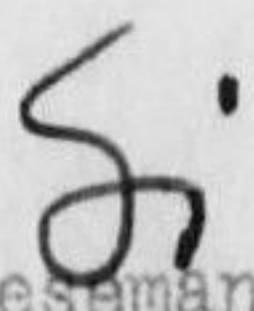
Has any attempt been made to formalize arrangements under which people who secured additional education through the assistance of the Saudi Government will be made available as counterparts to U. S. technicians when they return to Saudi? Is there available any roster of trained Saudis who might work with our technicians?

In reading this over, I realize it sounds highly critical. That is not the intention. Rather, we have tried to point up the elements which seem to us at this distance to require additional attention. Impartial analysis after the period of initial negotiation and adjustment has been gone through should result in pointing up many things which are buried in day-to-day operations and problems.

You have done a magnificent job in pinchhitting as Country Director, an assignment which you reluctantly assumed and which has kept you from operations in your own field. Our delay in sending you a Country Director has been solely because of inability to find someone who could carry the tremendous load with its peculiarly difficult requirements. Until we can produce, I know you will carry on as ably as you have been doing.

Enclosed is the condensed statement on the program in Saudi which, with modifications, will be used in justifying the budget request. Additional material has been requested since this draft was prepared and that is now being assembled. I'd like it if you would personally go over this material and cable me of any changes which you think important to be made.

Sincerely,


E. Reese
Assistant Administrator
in charge of
Near East and African Development Service

Enclosure.

CONFIDENTIAL

INCOMING TELEGRAM

FROM: Secstate

April 22, 1953

600

TOTEC TCA/NEADS needs certain additional up to minute information to strengthen presentation and defense of 1954 programs before Congress next month. This same information will be invaluable to TCA/W and to 10 agencies in vital but increasingly difficult jobs of recruiting qualified technical personnel. Information desired consists in (A) those positions not presently authorized which should be authorized and recruited for immediately (B) those positions in addition to those not now authorized and those which would be authorized pursuant to (A) above which are apt to be firm and recruitable by July 1, 1953.

The (B) category of positions will enable projection of recruitment plans and making preliminary TE contacts with prospective incumbents. Utilize form TCA 17 for stating position and incumbent requirements. Data requested herein should be sent TCA/NEADS for receipt not later than May 1.

SMITH

TCA DISTRIBUTION:

f-1

f-3

Budget

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 8, 1953.

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: Mr. G. W. Ferguson, Chief
Health and Sanitation Division

RE: Budget

In planning projects for this and next fiscal year, I find it extremely helpful to be informed as to how much money is available for the Division of Health. Since I have been here I have never received any financial information, a fact which has to some degree handicapped planning.

I respectfully request that the Division of Health and Sanitation receive periodic financial statements as to the amount of money which we can expect to spend on Health projects.

cc: J. Stacy

Budget

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 8, 1953.

MEMORANDUM TO: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: Mr. G. W. Ferguson, Chief
Health and Sanitation Division

RE: Budget

In view of the fact that we do not know what the Health Division's budget will be for Fiscal Year 1954, it does not seem reasonable to me to prepare a supplement to the present program agreement obligating funds for the next Fiscal Year.

Therefore, may we request permission from Washington to continue as we are and use the project agreements to obligate funds? This is allowable as described in paragraph 7.3h of Circular #32 dated February 20, 1953. If permission is granted, a letter will be prepared covering this point.



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 7, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: G. W. Ferguson, Chief, Health and Sanitation Division

SUBJECT: Budget

G. W. F.

Several weeks ago I talked to Mr. Stacy about the possibility of obligating \$100,000 for the quarantine station from this year's budget. I was informed that this may be possible but that it depended on the amount of money to be spent for the purchase of road building equipment for the Asir.

No mention was made of the quarantine station in my estimate for the Health and Sanitation Division budget for 1954.

In view of these facts, do you advise sending a supplemental budget to TCA/W including the \$100,000 for the quarantine station?

TCA:GWFerguson:o

Noted



THE FOREIGN SERVICE
OF THE
UNITED STATES OF AMERICA

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

April 6, 1953

MEMORANDUM

TO: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

FROM: Mr. G. W. Ferguson, Chief, Health and Sanitation Division

SUBJECT: Use of Program Agreements as Obligating Documents -
February 20, 1953

G.W.F.

The following are questions which came to me when I read the above-mentioned document:

1. How can we write a program agreement or yearly supplement obligating funds without knowing what our budget will be?

2.. In view of the fact that the Ambassador signs all project agreements, can we use alternate 7.34 which allows signing of project agreements without signing program agreements which obligate funds?

cc: Mr. Betzig

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1

- 1954 - Budget Review

TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia

February 4, 1953.

MEMORANDUM

MEMORANDUM TO: Mr. E. Reesman Fryer, NEADS, TCA/W

FROM: Mr. John A. Dunaway, Acting U. S. Director of
Technical Cooperation in Saudi Arabia

RE: Revision of Budget Submissions for FY-1954

Attached are five copies of the narratives for the FY-1954 budget which have been rewritten in accordance with TCA/Washington request.

Also attached are five copies of the tabulations, the figures of which were submitted by the Division Chiefs.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

Enclosures

- 1954 BUDGET REWRITE-

SUMMARY OF BASIC DATA CONCERNING THE COUNTRY, ITS PEOPLE AND ECONOMYA. Geography - Climate

Saudi Arabia, located in one of the world's desert belts, has an area variously estimated at from 600,000 to 800,000 square miles. Uncertain rains, which in most of Saudi Arabia average between 2" and 5", can mean localized droughts of several years duration. The southwest corner of Saudi Arabia, in the highland regions, may have as much as 12" yearly. The land is characterized by sand and rock deserts, barren mountains and plateaus, which being devoid of a thick plant cover, are most subject to wind, sand and water erosion.

B. Natural Resources

Nature was not generous to Saudi Arabia. Water, a prime resource, is most deficient. Gold, salt, cement rock and other minerals are known to exist, although definite information concerning commercial feasibility is lacking. There are two gold mines, one of which is probably to be shut down and another which is not yet producing. The only rich strike has been in oil and natural gas.

Considerable areas of uncultivated but arable land exist in the Tihama-Asir region. The use of this land is dependent upon water together with the application of capital, technical knowledge and careful planning and organization.

C. Population

Saudi Arabia's estimated 2,500,000 to 4,000,000 people are still largely living as in the past in small isolated farms, villages and

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settlements on the seacoast; in oases and wadis or on the poor grazing lands as wandering nomads. While few accurate statistics are available, probably 25% of the people are bedouin who may be wholly nomadic or part nomad-part cultivator. There are few sizeable cities - namely Jidda, 100,000; Mecca, 100,000; and Riyadh, 80,000.

A movement appears to exist of peoples to the cities. This is noticeable in the Hasa oil towns where people from all over Arabia may be found working. At Riyadh, many bedouins have gathered, drawn there both by the severity of the recent drought and by the King's hand-out of food and supplies. The Riyadh Railroad and the new water supplies have also enabled the city to grow considerably. Jidda and Mecca are also profiting indirectly as a result of the oil boom. With slowly improving living standards, Saudi Arabia's population can be expected to increase considerably in the future.

D. Government

The Saudi Arabian Government is semi-feudal and autocratic with the King, both absolute monarch and religious leader, ruling through his sons, advisors and ministers. As he grows older, the problem of who is to succeed him grows serious. To forestall trouble, he has designated the Crown Prince to succeed him.

Centralization of power in the King's hands and attention to even small administrative details by him has prevented the growth of any sort of a representative government and created an officialdom which is prevented from making important decisions. The Minister of Finance does, however, take some initiative into his own hands. Complicating the situation is the fact that there are three centers of government activity,

the capital, Riyadh; Mecca and Jidda. Decisions of even minor importance have to be referred to Mecca and Riyadh before action can be taken. This naturally results in loss of time and stifling of local initiative. Also, as Mecca is closed to non-Moslems and visits to Riyadh are limited to SAC invitation, daily intercourse with government officials is much more difficult than it is in most countries.

The government is characterized by inadequate organization of the Ministries and Departments which function with antiquated procedures and a decided lack of personnel capable of carrying on a modern state's business. A government so organized might have sufficed for the grazing-agricultural-pilgrimage economy of twenty years ago but not for the problems of running the more complicated economy coming into being.

B. Industry - Industrial Development

There is little industry save small handicraft shops and consequently most consumer goods and capital goods must be imported. An economic development potential is apparent in the possible growth of industries based on oil and natural gas to produce fertilizers, liquid gas, etc. Also rising local buying power should make it possible to promote the production locally of certain materials and goods such as cement, tiles, and other building materials, etc., and also increase the number of profitable service industries.

Investment of funds by local or foreign capital requires a clearer and more favorable attitude on the part of SAC than demonstrated to date. Local capital has developed the Taif, Mecca and Dammam electric plants.

To date, SAC has done little direct industrial financing though it did help finance a soap factory which is not yet functioning.

F. Transportation and Communication

Difficult terrain features, the small population and the government's limited budget in the past prevented Saudi Arabia from acquiring a modern transportation and communication network. Until a few years ago camels and donkeys on land and dhows sailing the coastal waters were the chief means of transport. The Me'an-Medina Railroad line was never repaired following its destruction in World War I.

In recent years a railroad has been built from Dammam to Riyadh, the Mecca-Jidda road paved, and the Medina-Jidda road is being paved with 60 miles completed. Other roads and the Riyadh-Jidda Railroad are in the planning stage. Aramco has paved or oiled a number of Hasa Province roads in order to carry on its operations.

G. Agriculture

Agriculture in Saudi Arabia is handicapped by limited water resources and a subsequent restricted quantity of arable lands, a poor network of intra- and inter-regional surface transportation facilities, antiquated farming techniques, poor selection of plant varieties, lack of any technical aid and advice on the part of the Government, lack of any institutions to give farm credit to the cultivator, poorly organized marketing facilities and practically no educational or extension facilities. Less than 5% of the land is cultivated. In the past, when foreign exchange was derived from such uncertain sources as the Haj revenues, food imports had to be limited. Famine was not unknown. The people are still poorly nourished and many live on the barest of diets. The bedouin have never derived more than a precarious existence from their flocks. Dates are the leading crop followed by cereals and small quantities of fruits and vegetables.

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H. Education

1950 figures list 172 primary and 10 secondary schools where but 20,613 students attend the first and 796 the second. Due to the lack of commercial and vocational schooling, many foreigners are employed in commercial establishments and in government agencies. Higher education is limited to a college to train students to be judges and no agricultural schools exist. There are no schools for girls. It is not difficult to realize how profoundly the lack of a modern educational system affects government, industry, the professions, agriculture and all other trades.

I. Health

The health and sanitation conditions under which the great majority of people live in Saudi Arabia are very poor. The lack of hospitals, clinics, doctors, dentists and mid-wives, in all but the larger cities, means that the vast majority of the people are born, live and die without medical or dental care. While no reliable statistics exist, the death rate for babies and young children is believed to be very high. The incidence of malaria, T.B., venereal disease, dysentery and other debilitating diseases is great.

Sanitary facilities such as sewerage, cesspools, garbage disposal, etc., are only beginning to be improved but in general are still very primitive. Clean water supplies are slowly being provided but most people, even in the largest cities, obtain water from motor tank trucks or donkey drawn water carts. Unsanitary, crowded living conditions are prevalent and are the result of poverty and ignorance.

From the diseases which now afflict them. Transportation facilities must also be improved.

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Markets are unsanitary with food exposed to flies, dirt, dust, and the hands of passers-by. The problem is aggravated by the indifference with which these conditions are regarded. A great deal of this attitude is a result of the Moslem faith with its fatalistic acceptance of conditions.

However, in 1952 the Ministry of Health's budget was increased. Fifteen years ago, no modern hospital existed and even doctors were very few in number. Preventive health measures are only beginning to be undertaken as in the Quarantine Service, the quarters for pilgrims, malaria control projects and the like.

Current Economic and Political Problems

In large part, Saudi Arabia's problems arise from the circumstances which have placed relatively great wealth at the disposal of a hitherto poor, loosely organized state. Also, in the past, even if the Saudi Arabian Government had willed it otherwise, poverty prevented it from carrying out more than a mere skeleton of a program in education, health and sanitation, agricultural improvement, roads and communication, pilgrimage facilities, etc.

There are a number of basic problems:

- 1) Most of the people live in dire poverty and have an extremely depressed standard of living. Therefore, a central objective should be to achieve a more equitable distribution of income through higher agricultural and industrial output and productivity.

To raise the latter the people must be better educated and freed from the diseases which now afflict them. Transportation facilities must also be improved.

- 2) These and other services require a well-conceived program whereby government revenues may be expended fruitfully. The national income in large part goes to the government; therefore, development is in its hands. However, it is difficult for a feudal Kingdom to evolve into a state capable of carrying out many complicated functions. A modern, responsible executive and some sort of legislative body capable of expressing the people's needs are necessities still lacking. Ministries and departments should be strengthened and organized so as to become responsible bodies capable of carrying out their duties. Efforts should be made to raise standards of efficiency. The people of Saudi Arabia should be given reasons to feel that they are the real beneficiaries of the oil wealth. The oil resources should be used as a national heritage to build a strong, independent Saudi Arabia.
- 3) Probably more than most other under-developed countries, Saudi Arabia lacks technicians capable of instituting and carrying out work in education, agriculture, public health, government and industry. Hence, even if a well-integrated plan existed, or even if the government knew of the results to be gained from certain projects, Saudi Arabia probably could not carry out the plan without the help of foreign technicians. This makes a broad training program and the growth of educational institutions of prime importance.

Saudi Arabian Economic Development Plans

Despite the desire of the King to develop his country's resources, Saudi Arabia's need for external assistance and of the particular cooperation to improve the living standards of his people and provide better pilgrimage facilities, it has not led to long-range, broadly conceived development plans. The Government's activities have been devoted to constructing some miles of roads, a railroad, hospitals, harbor works, airports, city street paving and electric works. The Saudi Arabian Government's interest in development is shown in its early signing of a U. S. Point Four General Agreement for technical aid and cooperation and by the number of foreign individuals and missions coming to the country at the King's invitation. To date, Riyadh, Mecca, Taif, and Jidda have been the main beneficiaries with Dammam, Dhahran and other Hasa towns profiting from work carried on by the Arabian American Oil Company.

While the results achieved so far should not be underestimated, the work done lacks balance and breadth. Revenues should be husbanded and spent with great care. An economic development plan needs adequate funds, fixed goals and purposes and an efficient administrative organization. Expenditures for public works of all types should be complemented by growing budgets for regular education, agriculture, health, and other activities. The inadequate expenditures for agriculture have given little permanent benefit. Little, if anything, has been done to broaden the base of the Saudi economy through promoting the growth of industry.

Point Four Objectives

A number of factors must be considered in presenting an explanation of Saudi Arabia's "need for external assistance and of the particular opportunities for the United States -- under specified policy objectives -- to make a real contribution to the national well-being and the strengthening of the free world as a whole."

Saudi Arabia is a nation which is of definite importance to the U. S. for the following reasons: Its strategic position militarily; its great oil industry and reserves necessary for the functioning of Free Europe's economy; the fact that this oil industry, representing one of the largest single overseas investments of the U. S. with its subsequent considerable yearly returns to U.S. taxpayers and government; the position of leadership held by Saudi Arabia amongst the Arab States and the prestige it has in the Middle East; its friendship and trust in the U.S. - an attitude uncommon amongst the Middle East nations; and its pro-western policy in the past and present.

Being important to U.S. policy, the question arises concerning the need of Saudi Arabia for external assistance. "Why", it is asked, "should an oil rich country find such aid necessary"?

Saudi Arabia needs external assistance because of the revolution caused in her way of life by the discovery and exploitation of oil deposits. The need to transform a simple subsistence-level economy country into a modern nation is apparent to anyone familiar with the local scene. Guidance at this initial stage is an important factor in determining what Saudi Arabia becomes in the future. There is a great gap between receiving a fair income and in being able to employ it profitably. Anything the U.S. can do to create conditions conducive to an economically and socially useful employment of

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the Saudi Arabian Government's income will be amove in the direction of work with a nation still in the formative stage, seeking and needing foreign building a stable nation. Thus in its broadest sense the United States is aid. Saudi Arabia is not yet afflicted with the violent nationalistic tendencies characterizing those countries, which, unlike this country, were for years integrity and internal order through the growth of a sound economy and of a surrounded or controlled by European powers. Confidence in the United States healthy, educated people.

Being a leader amongst the Arab States, she can become a stabilizing wealth of the country exploited by U. S. companies and JAG's willingness to element in one of the world's most explosive areas. However, her heritage allow the Dhahran airfield to be used by American planes. of poverty and the lack of effective governmental agencies make this

Saudi Arabia can be a land of new promise. This is said with other transitional phase a difficult one. Unless her people become educated, realization of the immense tasks facing her government. It would appear as better fed and have proper health facilities, political and social disturb- though a little aid and assistance might go further here than in other ances are not impossible. It should be recognized that the demands on countries. Some countries have a precarious balance between a large and Saudi Arabia are heavy. Even were the new revenues used most carefully, so rapidly growing population and known resources. In some instances, the much work in so many fields has to be started and carried along that it will population would appear to be out-pacing the growth of agriculture and take years to provide the country with services long accepted as necessities industry. Saudi Arabia, on the other hand, has a population relatively in many other countries.

small in comparison to its new resource potential. This population-resources Furthermore, mere revenues do not change the minds of a people's ratio favors gradual change by using the new resources to create a higher governors overnight. It is the government of a culture innured by a standard of living.

combination of poverty and the Moslem religion to accepting disease, hunger,

It is not intended to over-estimate the degree to which the TCA program heat and diet as part of a life view. Thus it is difficult for them to grasp one help in implementing this policy. However, Point Four's capacity to make the conception of a dynamic plan to bring about a new way of life. TCA can contributions toward this goal should not be ignored. Saudi Arabia is the help to stimulate SAG into beginning and enlarging such endeavors. Such state of a struggle for power and influence. Few countries depend and will guidance, costing relatively little in terms of dollars, can have the effect continue to depend to such a great extent upon foreigners and foreign missions of motivating SAG to spend much larger sums than currently for economic as does Saudi Arabia. Point Four is thus presented with an opportunity to development purposes.

have U. S. technicians work in close cooperation with SAG. They ought to have Conditions in Saudi Arabia while difficult would yet appear somewhat more as influence which should help in strengthening the ties of friendship between propitious than in a number of other Middle Eastern countries. In Arabia, TCA

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The United States and Saudi Arabia and is perhaps forestalling some other works with a nation still in the formative stage, seeking and needing foreign aid. Saudi Arabia is not yet afflicted with the violent nationalistic tendencies characterizing those countries, which, unlike this country, were for years occupied or controlled by European powers. Confidence in the United States has been shown in many ways, including the desire to have the oil and mineral wealth of the country exploited by U. S. companies and SAG's willingness to allow the Dhahran airfield to be used by American planes.

Saudi Arabia can be a land of some promise. This is said with sober realization of the immense tasks facing her government. It would appear as though a little aid and assistance might go further here than in other countries. Some countries have a precarious balance between a large and rapidly growing population and known resources. In some instances, the population would appear to be out-pacing the growth of agriculture and industry. Saudi Arabia, on the other hand, has a population relatively small in comparison to its new resource potential. This population-resource ratio favors gradual change by using the new resources to create a higher standard of living.

It is not intended to over-estimate the degree to which the TCA program can help in implementing this policy. However, Point Four's capacity to make contributions toward this goal should not be ignored. Saudi Arabia is the scene of a struggle for power and influence. Few countries depend and will continue to depend to such a great extent upon foreigners and foreign missions as does Saudi Arabia. Point Four is thus presented with an opportunity to have U. S. technicians work in close cooperation with SAG. They ought to have an influence which should help in strengthening the ties of friendship between

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the United States and Saudi Arabia and in perhaps forestalling some other power from acquiring influence through employment of its own technicians. United States technicians can be a main line of communication between America and Arabia. They can help to bring to Saudi Arabia some of our ideas and our ways of doing things. In addition to technicians, Point Four should be adequately supplied and equipped to carry out concrete projects and works. A technician does not function in a vacuum. He needs tools to work with or he is incapable of carrying out his task.

In November, 1952, Program Agreements were signed for the following Divisions: Transportation and Communication, Agriculture, and Natural Resources. Project Agreements were signed for the Railway Survey and the Aerial Survey.

In December, 1952, the Public Health and Sanitation Agreement and the Rural Community Development Project Agreement were signed.

In January, 1953, the last Program Agreement, namely that for Education, was signed thus consolidating all of the Division Programs.

Agreements for cooperative Public Health projects for the organization of a laboratory for the manufacture of vaccines at Taif and for the construction of pit privies for primary schools have been drawn up and are being discussed with the Saudi Arabian Government.

Another project dealing with the local training of laboratory technicians is also in the discussion stage.

In Education, projects which are being studied concern a police-fireman training mission; local training projects of various sorts and project agreements with the School of Commerce and the Industrial School, both of Jidda.

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SECTION III

SPECIAL PROBLEMS

A. Status of over-all negotiations of Program and Project Agreements

The Point Four General Agreement was signed on January 17, 1951.

The Public Administration and Government Services Division functions under the Point Four Project Agreement in the Fields of Finance and Customs signed September 25, 1951. It is expected that this Agreement will be revised by an exchange of letters to make it conform to the other Program Agreements.

In November, 1952, Program Agreements were signed for the following Divisions: Transportation and Communication, Agriculture, and Natural Resources. Project Agreements were signed for the Railway Survey and the Aerial Survey.

In December, 1952, the Public Health and Sanitation Agreement and the Rural Community Development Project Agreement were signed.

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In Education, projects which are being studied concern a police-fireman training mission; local training projects of various sorts and project agreements with the School of Commerce and the Industrial School, both of Jidda.

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2. TCA and Other Technical Assistance Concerns

In the past, due to the time-consuming nature of negotiations with the Saudi Arabian Government, emphasis has not been placed upon drawing up separate project agreements save for large scale projects as the Railway Survey. However, it is expected that all future activities will be carried out only after formal signing of project agreements.

Work under the Rural Community Development Project is being pushed. Talks are taking place concerning SAG and TCA contributions towards improving the road to the El Darb project site.

There will be given instruction courses and also trained through actual field work. In its first year of work in Saudi Arabia, WHO has done little control work, preferring to defer this until the municipalities had been assigned. The team has carried out studies concerning type and quantities of mosquitoes, incidence of disease and related matters in the Makkah - Jeddah - Jidda area. The Saudi Arabian Government provided a lump sum of 30,000 Saudi Riyals to be expended for laboratory salaries and incidentals plus trucks, oil, office building and furnishings, etc. Another lump sum is to be provided when the first is spent.

1) A venereal disease control team is located at Makkah. It consists of two or three doctors. As non-Muslims are not permitted to go to Makkah, they have not yet been contacted and little is known of this program.

2) A quarantine adviser - Dr. El Far, an Egyptian - has recently come to Jidda to work with the Quarantine Service, directed by Dr. Hachou. It is believed WHO is to install approximately \$15,000 worth of laboratory equipment in the new building of the Quarantine Service.

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A number of conferences with WHO personnel have been held by TCA technicians with the object of working in close cooperation and in developing projects which aid Saudi Arabia but do not cause duplication.

B. TCA and Other Technical Assistance Programs

World Health Organization - At this time there are three groups of WHO technicians in Saudi Arabia.

1) A malaria control team consisting of a malarialogist, entomologist, and an assistant - all Egyptian. The team works in the Jidda - Wadi Fatima - Medina - Mecca region with the objectives of carrying on malaria control work and training Saudis. The Saudi Arabian Government only recently appointed the necessary counterparts for training. Four young men of the Health Ministry have now been assigned from Jidda and five are to be assigned from Mecca. These will be given instruction courses and also trained through actual field work. In its first year of work in Saudi Arabia, WHO has done little control work, preferring to defer this until the counterparts had been assigned. The team has carried out studies concerning type and quantities of mosquitoes, incidence of disease and related matters in the Mecca - Wadi Fatima - Jidda area. The Saudi Arabian Government provided a lump sum of 30,000 Saudi Riyals to be expended for laborers' salaries and incidentals plus trucks, oil, office building and furnishings, etc. Another lump sum is to be provided when the first is spent.

2) A venereal disease control team is located at Mecca. It consists of two or three doctors. As non-Moslems are not permitted to go to Mecca, they have not yet been contacted and little is known of this program.

3) A quarantine adviser - Dr. El Far, an Egyptian - has recently come to Jidda to work with the Quarantine Service, directed by Dr. Hachem. It is believed WHO is to install approximately \$12,000 worth of laboratory equipment in the new building of the Quarantine Service.

A number of conferences with WHO personnel have been held by TCA technicians with the object of working in close cooperation and in developing projects which aid Saudi Arabia but do not cause duplication.

FOOD AND AGRICULTURE ORGANIZATION

The FAO group has been working in Saudi Arabia for over two years concentrating on studies in the Asir and other areas. Published reports include "Date Cultivation in Saudi Arabia" by el-Baker and "Report to the Government of Saudi Arabia on Land and Water Resources" by C. Wm. Burningham. A report on Tihama soils by a Mr. Ferris and reports of Mr. Tothill have not been published. At this time there are ten technicians with the Mission. These include W. Fred Johnson, Chief FAO Mission; C. Theodore Carlson, Date Specialist; N. Simansky, Chief, Jizan Project; Wm. Zammit, Engineering Administrative Assistant; Thomas O. Smallwood, Leader, Tihama Investigations; D. Astafieff, Irrigation Engineer; Dr. Emeric Mez, Engineering Survey Assistant; Abdalla Arar, Engineering Survey Assistant; Mohammed K. El Saby, Fisheries Biologist, Luigi Farine, Fisheries Engineer.

Several FAO projects have been proposed to the SAG. A date packing and marketing specialist is to work at the Hasa Oasis (Hofuf) in order to push the export of dates. Machinery has arrived and will be set up in Jidda in order to pack Medina dates for sale to pilgrims. At this time the Hasa project is stalled while SAG decides whether to carry out this proposal.

Recently an Egyptian fishery expert arrived in Jidda aboard a boat chartered by FAO to carry out studies for 6 months to determine the feasibility of establishing modern commercial fishing in the Red Sea. The project is encountering many difficulties including extremely high cost of ice, lack of local refrigeration facilities, non-existence of marketing facilities other than small fish peddlars, local dietary habits concerning the edibility of fish and the difficult problem of future financing.

The major FAO proposal is for an extensive project in Tihama-Asir at Jizan. Here plans have been drawn up for the establishment of an agricultural

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school and experiment station and for irrigation works to bring into cultivation an extensive tract of land. The project costs, depending on the extent of the work to be done, vary from one to eight million dollars.

Although TCA was not consulted when the project proposals were drawn up, due to lack of means of financing the project itself, FAO would like to have TCA provide the money to carry its proposals into action. This presents many problems of policy over and beyond the very real one of the great cost of the project. FAO has an experienced staff and doubtless has much technical competence to offer SAG. It is possible that FAO technicians will be consulted and used for specific projects in the future. SAG has decided to finish aerial photography work in the area and complete topographical and irrigation studies already started. SAG's decision to go ahead and finance the field work has not been announced.

Although Point Four was not consulted when the project proposals were drawn up, TCA technicians have worked with FAO in making geological and water studies for the projects. FAO at present works under the direction of the Director General of Agriculture. Relations with this Department are not good and there are rumors that FAO may withdraw its technicians from Saudi Arabia.

A medical doctor, a malariologist and a sanitation-engineer have been recruited but are awaiting security clearances prior to coming to Saudi Arabia. An additional sanitation-engineer has been requested. Recruitment of a local medical doctor in the field is taking place. It is expected that recruitment of a Medical Officer - Laboratory and Medical Office Supply - will be requested in the near future.

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C. Recruitment of Personnel

As of this date the recruitment requirements of U. S. technical personnel are as follows:

Program

Administrative Assistant - Procurement and four secretaries. All are being recruited.

Agriculture

Technicians of the following types: Soil Specialist, Animal Husbandry Specialist; Horticulturist, Entomologist, Irrigation Engineer, Date Specialist, Agriculture Extension Specialist. Recruitment has been requested of all of these technicians save the date specialist and the horticulturist. Another entomologist will have to be recruited to replace the technician originally assigned but returned to the United States for medical reasons.

Education

No requests at this time.

Public Administration and Government Services

A statistician is being recruited for customs

An accountant for SAG budget.

Public Health

A medical doctor, a malarialogist and a sanitarian-engineer have been recruited but are awaiting security clearances prior to coming to Saudi Arabia. An additional sanitarian-engineer has been requested. Recruitment of a local medical doctor in the field is taking place. It is expected that recruitment of a Medical Officer - Laboratory and Medical Office Supply - will be requested in the near future.

Transportation and Communication

It is probable that in a short time, recruitment of a communication engineer will be requested.

Natural Resources

Two of the staff are due for home leave in the next five months.

Recruitment of a replacement for one technician in Saudi Arabia on a one-year term of duty is dependent on the decision concerning projects to be undertaken. Return of the technicians on home leave is dependent on a number of factors.

Proposed Natural Gas Fertilizer Project

Recruitment of a technician to advise SAG in the use of natural gas and other industrial development problems is being undertaken. At this time it is not known in the field whether this technician will be a regular TCA employee or a contracted person.

Range Conservation Project

Washington is recruiting the services of a range conservation expert to study and advise SAG what can be done to improve range land use.

It should be noted that the grades and positions on the summary breakdown sheets are in general in the highest brackets. This is to take care of all likely expenses. However, junior or middle grade technicians, if qualified professionally, should be recruited.

Size of Mission

For 1954, recruitment strength is set at 43 for regular TCA personnel. This is considered to be an optimum size taking into consideration available housing, size of Saudi Arabian program, attitude of SAG, and the absorptive

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capacity of the country. A serious problem is caused by the very nature of Saudi Arabia. Outside of Jidda and the oil towns in Haza, living conditions are harsh. Yet if Point Four is to have a program other than merely near the cities, it needs to recruit personnel who have the capacity and make-up to live under primitive conditions, isolated for extended periods of time. The fanatical nature of the Wahhabi religious group precludes the use in Saudi Arabia of personnel obtained from qualified religious groups.

Recruitment for Saudi Arabia is thus difficult for it is not only a question of technical competence but also of particular personal qualifications. It need not be stated that the success or failure of the program in large part depends on the type of men and women assigned to work there.

D. Host Government Contributions

In FY-52, SAG contributions are estimated as having been \$397,755. In FY-53, SAG contributions through January 15, 1953, are estimated as being \$545,800. To date, SAG contributions have been greater than Point Four contributions. It would seem probable that this will continue to be true in the future as projects get underway in education, health, agriculture, and transportation. SAG demonstrates a desire to get things accomplished and if properly motivated it is likely that contributions to joint projects will increase. However, the knowledge that other countries receive larger sums through TCA has created difficulties in the past with SAG. The government has large oil revenues but also many obligations. It considers it needs TCA aid as much as any other country. This attitude, plus the primitive nature

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of Saudi Arabia, would make it extremely difficult, if not impossible, to carry on a program unless adequately provided with supplies and equipment.

For full details, refer to American Embassy, Jidda, TOTEC Despatch #21, January 26, 1952.

E. Supply - Equipment Requirements

Refer to cable of January 28, concerning supply - equipment requirements of FY-1953. As additional projects get underway, it is expected that there will be a consequent rise in these requirements for FY-54. At this time it is difficult to provide this information in greater detail.

F. Funds

It is expected that by the end of FY-1953, the full sum of money allocated to the Saudi Arabian program will have been obligated.

CONFIDENTIAL SECURITY INFORMATION

Summary
FY-1954 Budget
Technical Cooperation Administration
Jidda, Saudi Arabia

FIELD OF ACTIVITY	U.S. Technicians		Local Empl		Trainees		Transportation		Supplies and Equipment	TOTAL
	No.	Cost	No.	Cost	No.	Cost	Persons	Effects		
100 Agriculture	9	99300	4	11800	-	-	31500	8000	135000	285600
200 Public Health & Sanitation	7	85488	4	11800	-	-	35900	7000	135000	275188
300 Education	3	37146	4	13600	33	135000	9700	3000	125000	323446
400 Natural Resources	5	71676	3	8000	-	-	37000	10000	280000	406676
600 Transp. & Communica.	2	30240	1	2700	-	-	10600	2000	110000	155540
700 Pub. Adm. & Govt. Serv.	5	70633	1	3300	-	-	25000	10000	10000	119633
900 Prog. Dir.	13	98737	16	25500	-	-	27600	10000	335000	496837
TOTALS	44	493220	33	77200	33	135000	177500	50000	885000	2062920

CONFIDENTIAL SECURITY INFORMATION

FY-1954 Budget
 Technical Cooperation Administration
 Jidda, Saudi Arabia

Reg. No.	Positions - Title	No.	M.Y.	Grade	PERSONAL SERVICES (.01)			Total	TRAVEL (.02)				Trans. Effects (.03)	Rents Etc. (.06)	Contr. Serv. (.07)	Supplies & Equip. (.08-.09)		TOTAL
					Salary	Diff.	Allow. C.O.L.-Sep.		Mid-East	S.A.	U.S.	Total				Proj.	Prog.	
00	AGRICULTURE																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Agronomist	1	1	TGA-3	9130	2282	2400	13812										
	Animal Husbandry	1	1	TGA-3	9130	2282	2400	13812										
	Horticulturist	1	1	TGA-3	9130	2282	2400	13812										
	Entomologist	1	.5	TGA-3	4565	1141	1200	6906										
	Irrig.Engineer	1	1	TGA-3	9130	2282	2400	13812										
	Soils Specialist	1	.5	TGA-3	4565	1141	1200	6906										
	Date Specialist	1	.5	TGA-3	4565	1141	1200	6906										
	Agric.Ext.Spec.Agt.	1	.5	TGA-3	4565	1141	1200	6906	4,000	10000	15300	29300	8000			135000		
	TOTALS	9	7	-	65810	16450	17040	99300				29300	8000			135000		271600
00	PUBLIC HEALTH & SAN.																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Med.Officer	1	1	TGA-3	9130	2282	2400	13812										
	Entomologist	1	.5	TGA-3	4565	1141	1200	6906										
	Sanitarian	1	1	TGA-3	9130	2282	2400	13812										
	Sanitarian	1	1	TGA-3	9130	2282	2400	13812										
	Med.Officer-Lab.	1	1	TGA-3	9130	2282	2400	13812										
	Med.Officer-Supply	1	.5	TGA-3	4565	1141	1200	6906	4000	15000	14300	33300	7000			135000		
	TOTALS	7	6	-	56680	14168	14640	85488				33300	7000			135000		260788
00	EDUCATION																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Teacher	1	.5	TGA-3	4565	1141	1200	6906										
	Teacher	1	1	TGA-3	9130	2282	2400	13812										
	Training Grants								2000	2500	5000	9500	3000		135000	125000		
	TOTALS	3	2.5	-	24725	6181	6240	37146				9500	3000		135000	125000		309646 Incl.all trng.awards

Technical Cooperation Administration
Jidda, Saudi Arabia

Prog.No.	Positions - Title	No.	M.Y.	Grade	PERSONAL SERVICES (.01)			Total	TRAVEL (.02)				Trans. Effects (.03)	Rents Etc. (.06)	Contr. Serv. (.07)	Supplies & Equipmt. (.08-.09)		TOTAL
					Salary	Diff.	Allow. C.O.L.-Sep.		Mid-East	S.A.	U.S.	Total				Proj.	Prog.	
400	NATURAL RESOURCES																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Geologists	3	3	TGA-3	27390	6846	7200	11136										
	Hydraulic Eng.	1	1	TGA-3	9130	2282	2400	13812										
		5	5	-	47550	11886	12240	71676	3000	14000	18000	35000	13000		120000	160000		
												35000	10500		120000	160000		396676
600	TRANSP. & COMM																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Engineer	1	1	TGA-3	9130	2282	2400	13812										
		2	2	-	20160	5040	5040	30240	2000	4000	1000	10000	2000			110000		
												10000	2000			110000		152240
700	PUBLIC ADM & GOVT.SERV.																	
	Chief, Division	1	1	Pt.4-3	11030	2758	2640	16428										
	Budget Advisor	1	1	FSS-1	10400	2600	2540	15540										
	Tariff Advisor	1	1	TGA-3	9130	2282	2400	13812										
	Statistician	1	1	FSS-5	7185	1796	2060	11041										
	Accountant	1	1	TGA-3	9130	2282	2400	13812										
		5	5	-	46875	11718	12040	70633	3000	2000	20000	25000	10000			10000		
												25000	10000			10000		115633
900	PROGRAM DIRECTION																	
	Country Director	1	1	Pt.4-2	12000	3000	2800	17800										
	Executive Officer	1	1	Pt.4-3	11030	2758	2640	16428										
	Program Officer	1	.5	FSS-5	3590	898	1030	5518										
	Asst.Prog.Off.	1	.5	FSS-10	2220	554	600	3374										
	Budget & Fisc.Off.	1	1	TGA-3	9130	2282	2400	13812										
	Ad.Asst,Procurement	1	1	FSS-11	3900	975	1200	6075										
	Clerk Stenographer	3	3	FSS-12	10860	2670	2880	16410										
	Clerk Stenographer	4	4	FSS-13	12640	2840	3840	19320										
		13	12	-	65370	15967	17390	98737	3000	2000	22000	27000	10000	210000		125000		
												27000	10000	210000		125000		170737
																		Incl.all housing & maint.
	GRAND TOTAL	44	39.5	-	327170	81410	84360	493220	21000	149500	98600	167200	50000	210000	255000	675000	125000	1977320

PERSONAL SERVICES (.01)

Allow.

Prog.No. Positions-Title No. H.Y. Grade Salary Diff. C.O.L.-Sep. Total

Local Employees

100	-	Interpr.Hq.	1	1	-	3800	-	-	3800
		Interpr.Field	3	3	-	8000	-	-	8000
200	-	Interpr.Hq.	1	1	-	3800	-	-	3800
		Sanitarians	3	3	-	8000	0	-	8000
300	-	Teacher,Comm.Sch.	1	1	-	3800	-	-	3800
		Teacher,Comm.Sch.	2	2	-	6000	-	-	6000
		Progr.Asst.	1	1	-	3800	-	-	3800
400	-	Interpr.Field	3	3	-	8000	-	-	8000
600	-	Interpr.Field	1	1	-	2700	-	-	2700
700	-	Interpr.Hq.	1	1	-	3800	-	-	3800
900	-	Interpr.Hq.	1	1	-	4000	-	-	4000
		Foreman Lab & Chauff	1	1	-	2500	-	-	2500
		Maint.Man	1	1	-	4000	-	-	4000
		Electr.	1	.5	-	2000	-	-	2000
		Drivers	4	4	-	5000	-	-	5000
		Watchmen	4	3.5	-	4000	-	-	4000
		Ofc.boys & lsb.	4	4	-	4000	-	-	4000
						77200	-	-	77200

GRAND TOTAL

404370 81110 84360 570420

Mid East	S.A.	U.S.	Total	Trans. Effects (.03)	Rents Etc. (.06)	Contr. Serv. (.07)	Supplies & Equipmt. (.08-.09) Proj. Prog.	TOTAL
200	-	200	-	-	-	-	-	-
2000	-	2000	-	-	11000	-	-	-
600	-	600	-	-	11100	-	-	-
2000	-	2000	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
200	-	200	-	-	13800	-	-	-
2000	-	2000	-	-	10000	-	-	-
600	-	600	-	-	3300	-	-	-
200	-	200	-	-	1000	-	-	-
600	-	600	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	85100	-	-	-
-	8100	-	8100	-	85600	-	-	-
21000	57900	98600	177500	50000	210000	255000	675000	125000
								2062920

Budget

SecState

January 28, 1953

Priority

RESTRICTED

NOSEC

TOTEC

Reur priority 449. Revised FY 54 program presentation summary of revised figures. US technicians: Prog 100, 9; 200, 7; 300, 3; 400, 5; 600, 2; 700, 5; 900, 13; Total 44. Cost respectively in thousands: 99, 85, 37, 72, 30, 71, 99. Local employees respectively: 4, 4, 4, 3, 1, 1, 16; Total 33. Cost respectively 12, 12, 13, 8, 3, 4, 25. Trainees: Prog 300, 33; thousands 135. Travel respectively 32, 36, 10, 37, 10, 25, 27; total travel 178. Trans of effects respectively 8, 7, 3, 10, 2, 10, 10; total 50. Supplies and equip respectively 135, 135, 125, 280, 110, 10, 335; total 885. Figure Prog 900 includes rents and furnishings 300. Grand totals respectively 285, 275, 323, 407, 155, 120, 497. Total budget 2063. Details will be mailed Saturday.

Hare

JADunaway
TCA:JASacy:pm

SecState

January 28, 1953

Priority

RESTRICTED

NOSEC

TCSEC

Reur priority 449. Re supplies and equipment component FY 53 program.

Following information by item Annex C-5. All figures thousands. Prog 100

Item 10, 5; Item 16, 5; Item 19, 1; Prog 200 Item 16, 5; Item 26, 2; Item 28, 15.

Prog 300 Item 4, 10; Item 9, 10. Prog 400 Item 16, 5. Prog 600 RR Survey

Project 352, total includes undetermined amounts for Items 8, 12, 14, 16,

25, 28. Prog 800 Comm Develop Project 250 for equipment undetermined

distribution to Items 4, 6, 8, 10, 12, 13, 17, 19, 25, 26, 27, 28. Prog 900

Item 3, 16; Item 4, 2; Item 5, 10; Item 6, 50; Item 12, 20; Item 25, 2;

Item 30, 50.

Information requested re revised FY 54 program summarized separate
priority tel.

HARE

JADunaway

TCA:JASTacy:pm

Jidda, Saudi Arabia

January 25, 1953

MEMORANDUM

TO: John A. Dunaway
Acting U. S. Director

FROM: Edward Betzig
Acting Program Officer

RE: Host Country Contributions to Point Four Program

Reference is made to Circular Airgram, December 19, 1952, entitled "Host Country Contributions to Point Four Programs". The following report sets forth in some detail SAG contributions in the form of cash, material, supplies and services for FY-52 and FY-53.

Section 407 (c) of the Act for International Development states that assistance shall be made available by the U. S. only when a host country "pays a fair share of the cost of the program". In general, "Fair" share means a one to one ratio. It would appear that to date the Saudi Arabian Government has fulfilled this condition. In fact, SAG has contributed considerably more than the amounts expended by the U. S. Government. In FY-1952, U.S. expenditures are reported by NEADS as having been \$129,000. For this same period, SAG contributions are estimated as having been \$407,555. In FY-53, from July through January 15, 1953, Point Four expenditures from the regular budget are estimated at \$150,000. To this can be added the cost of the Railroad Survey - \$352,000. It should be noted that this Survey got underway in December and should be completed in the next eight or nine months. SAG contributions during this same period are over \$600,000, with the greatest proportion of this money having been spent for the purchase of drilling rigs, trucks and other equipment needed to put the recommendations of the Natural Resources Division into effect.

While SAG contributions to date have been larger than those made by TCA, it is hoped that the stimulus provided by other TCA Divisions will see increasing amounts provided for development purposes.

Program Pl

Jidda, Saudi Arabia

MEMORANDUM

January 15, 1953

TO: John A. Dunaway
Acting U. S. Director

FROM: Edward Betzig
Acting Program Officer

RE: Host Country Contributions to Point Four Program

Reference is made to Circular Airgram, December 19, 1952, entitled "Host Country Contributions to Point Four Programs". The following report sets forth in some detail SAG contributions in the form of cash, material, supplies and services for FY-52 and FY-53.

Section 407 (c) of the Act for International Development states that assistance shall be made available by the U. S. only when a host country "pays a fair share of the cost of the program". In general, "fair" share means a one to one ratio. It would appear that to date the Point Four Program in Saudi Arabia has fulfilled this condition. In fact, SAG has contributed considerably more than the amounts expended by the U. S. Government. In FY-1952, actual expenditures are reported by NEADS as \$129,000. For this same period, SAG contributions are estimated as having been \$407,555. In FY-53, from July through January 15, 1953, Point Four expenditures from the regular budget are estimated at \$150,000. To this can be added the cost of the Railroad Survey - \$352,000. It should be noted that this Survey got underway in December and should be completed in the next eight or nine months. SAG contributions during this same period are over \$600,000, being primarily expended for equipment for water resource work. Both governments have agreed to spend \$500,000 respectively for the Rural Community Development Projects.

It cannot be denied that if SAG spent its funds carefully, there would be very sizeable funds available for development purposes in cooperation with Point Four. Indeed, much greater sums should be spent for development purposes than at present. However, considering the political and strategic factors of Saudi Arabia involved and the possible stimulus Point Four can make toward directing SAG into a constructive program of development, it would appear as though to date Point Four has achieved a good degree of success in terms of Saudi contributions to the program.

SAG's income is increasing and it thus has credit to use for further development. The problem is to persuade SAG to use this credit for fruitful expenditures. Considering the nature of SAG, such is not easy but requires patience, persistence and understanding.

6.1 a.b.c.

The following estimates of actual payments (6.1b) are for FY-52 and FY-53. No figure, other than the \$500,000 Rural Community Development Project Fund, can be given of SAG commitments (6.1a). Except in the case of the above-mentioned project, the matter of total SAG commitments has not been discussed. Hence, no figure (6.1c) can be given re excess or under payments.

6.1 b Estimated Contributions of SAG - Fiscal Year ending June 30, 1952.

Total

Cash	\$9,800
Dollar equivalent	
in Kind	\$397,755
	<u>\$407,555</u>

Breakdown of dollar equivalent \$397,755

- | | |
|--|------------------|
| (1) Estimated figure of rental equivalent of lands and buildings | \$ 86,000 |
| (2) Spare parts, tires, repairs for automotive equipment | 5,700 |
| (3) Gas, oil for automotive equipment | 3,500 |
| (4) Five sedans, station wagon, Jeep | 26,000 |
| (5) Equipment used by Water Drilling Program including 4 Star Drills, Rigs, Rotary Drill, etc. | 207,000 |
| (6) Salaries of 65 local employees currently at \$9910 Monthly | <u>69,555</u> |
| | <u>\$397,755</u> |

Breakdown of Cash

Cost Hotel Rooms, Local Purchases, etc.	\$ 9,800
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Comments re FY-52

Item 1 - This item was given to Point Four by Sadek Hussein, SAG Liaison Officer, who got it from the contract company. It represents cost of furnished houses, office building, electricity and water for the TCA staff. Estimate is excessive but is made in accordance with local practice of paying for a building in three or four years.

Item 5 - Equipment listed under this item is for Water Drilling Program. It should be remembered that drills, etc., needed to carry out the Natural Resources Division proposals were also used to drill wells for Princes' palaces, gardens, etc. - obviously not work of a Point Four nature. However, the equipment was used primarily to bring water to cities, towns and settlements.

Item 6 - This item includes salaries of drillers, crews and field personnel of the Water Drilling Program plus Liaison Staff, etc.

6.1 b Estimated Contributions of SAG through January 15, 1953.

Total

Cash	\$ 8,200
Dollar equivalent	545,800
in Kind	\$554,000

Breakdown of dollar equivalent \$545,800

- | | |
|--|------------------|
| (1) Estimated figure of rental equivalent of lands and buildings | \$ 27,000 |
| (2) Spare parts, tires, repairs for automotive equipment | 4, 000 |
| (3) Gas, oil for automotive equipment | 2,500 |
| (4) Equipment purchased for Water Drilling Program. | 415,000 |
| (5) Salaries of local employees | 69,300 |
| (6) SAG contribution to Railway Survey | 27,000 |
| (7) Rental of shop for new equipment of Industrial School | <u>1,000</u> |
| | <u>\$545,800</u> |

The Water Drilling Program figure for equipment plus a percentage of the salary figure is only a part of the \$1,093,300 given by Baker Co., as the cost to SAG for operating the drilling program in 1952. This figure includes equipment purchased, salaries, supplies, etc. Thus the SAG contribution might be considered greater than the figure given with a wide margin to include non-Point Four related work done by the contract company for water drilling program for princes, amirs, etc.

6.3 A notable contribution from private sources is the School of Commerce in Jidda. The committee of local merchants has contributed an estimated \$3,000 by providing an apartment, electric light, desks, tables and other similar equipment and supplies.

6.4 Concerning Point 6.4, it might be noted that SAG's budget included the following items for current or normal activities in Point Four fields:

Construction Projects

Hospitals and Quarantine	SR 12,000,000
Government Buildings	2,000,000
Airports, roads, railroad (55,000,000 for RR)	78,000,000
Sewerage Works-Water Closets	6,250,000
Electric Plants	3,100,000
City Planning-City Street Paving	4,000,000
Water-Agriculture	1,500,000
Dams and Water Works for Cities	23,000,000
Land Improvement, Loans	<u>2,500,000</u>
	SR 132,350,000

(Roughly \$36,000,000 - Saudi Riyal worth 3.50 - 3.68 to the dollar)

It is not known what the item for the railroad signifies as no construction has begun.

Ministries

Department of Agriculture	SR 1,297,550
Ministry of Health	21,348,475
Department of Education	12,817,466
Roads Department	<u>994,385</u>
	SR 36,457,876

(Approximately \$10,000,000)

These figures give no indication of how effectively or carefully the funds are spent.

C. Contributions of office space, supplies, automobiles, interpreters, clerks, etc.

D. Voluntary labor contributions on construction project included in the program.

E. Contributions of money, property, or services by municipalities or other units of local government.

Host country contributions do not include:

1. Outlays by a host government on activities related to Point Four but not actually falling within the scope of program or project agreements.

2. Funds budgeted by a host government for current or normal activities covered by program or project agreements, unless

Jidda, Saudi Arabia

MEMORANDUM

January 12, 1953

TO: Sadek Bey Hussein
Director, Liaison Office
for Technical Assistance

FROM: Edward Betzig
Acting Program Officer

RE: Host Country Contributions to the Point Four Program

As we are required by law to provide TCA in Washington with information concerning contributions of a host country to the Point Four Program, it would be greatly appreciated if you would give us detailed information concerning the contributions of the Saudi Arabian Government to our program.

In general, host country contribution means a contribution to technical cooperation program, in cash or in kind, by the central government or local governmental entities of a host country or by private individuals, institutions, and other private sources within the country.

Specifically, it includes:

- A. The host government's contractual obligation to contribute a stated sum of money to a fund available only for projects included in a technical cooperation program.
- B. Money contributed to such fund in excess of the contractual obligation.
- C. Contribution of office space, supplies, automobiles, interpreters, clerks, etc.
- D. Voluntary labor contributions on construction project included in the program.
- E. Contributions of money, property, or services by municipalities or other units of local government.

Host country contributions do not include:

- A. Outlays by a host government on activities related to Point Four but not actually falling within the scope of program or project agreements.
- B. Funds budgeted by a host government for current or normal activities covered by program or project agreements, unless

the funds are segregated and made available only for projects included in the bilateral technical cooperation program.

- C. Outlays by a host government on programs or activities initiated cooperatively but no longer covered by program agreements, the host government having assumed full responsibility for the activity and U. S. participation having ceased.

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

RESTRICTED

January 15, 1953.

PROGRAM NARRATIVES FOR FY-1954
DIVISION OF AGRICULTURE

CODE NO.

100 . Agriculture, Forestry and Fisheries

Note: It should be understood that the present agricultural program is in the initial planning stage, and actual project work is awaiting the arrival of field technicians.

110 Agricultural Extension and Demonstration

Agricultural production standards are very low in Saudi Arabia, and barely provide a subsistence level for its rural population. This level of living can be raised by following improved farm practices which will provide more produce for the farm families and populated centers. Consequently, improved farm practices will be taught and demonstrated when and wherever possible.

111 Agricultural Schools

Less than 10 per cent of the population is literate. However, plans are that elementary vocational training in agriculture will be provided for adults and farm youth. Point 4 must stress this training in order that leadership and informed followers will carry on the work started.

112, Credit Facilities,
113, Rural Cooperatives,
114, Farm Marketing and Farm Storage

Plans in these areas will have to await further developments and technicians.

120 Research and Experiment Stations

In most situations it will be necessary to proceed cautiously in recommending improved practices where climatic and soil conditions are characteristic of the desert. In major farming areas where agricultural improvements will be undertaken, the Saudi Arab Government will be requested to provide plots of ground of sufficient

size

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PROGRAM NARRATIVES FOR FY-1954
DIVISION OF AGRICULTURE

Code No.

120 (Continued)

size to conduct modest agricultural experiments and demonstrations. The Food and Agriculture Organization has plans for developing an experiment station and an agricultural institute in the Asir. The above-mentioned experiment and demonstration plots could, if future developments warrant, become sub-experiment stations to be coordinated with the Asir station.

It will require careful procedure in attempting to improve crop varieties and livestock breeds suited to a desert country where water is very, very limited. Experiments must be carefully planned and conducted and include all factors of importance.

130

Plant Production, Development and Control

Increasing crop production is of tremendous importance where present production is low. Emphasis will be placed on improved methods in plant breeding, selection of varieties, fertilizing where profitable, controlling insect pests and diseases, and in management of the cropping program. Crop production experiments and demonstrations will be conducted.

140

Livestock Improvement and Animal Husbandry

Meat, milk, eggs and wool production per livestock unit is low in Saudi Arabia. To make desirable production improvements, it will be necessary to initiate selection and breeding programs, as well as provide more and better feeds and pastures. Much can be done to improve present livestock production standards by controlling pests and diseases. Crop and livestock programs would need to be thoroughly integrated.

150

Irrigation

Farm irrigation is paramount in Saudi Arabia since the average rainfall is about four inches annually. Much can be done to control the wadi sails and make more water available for cropping. This

would

PROGRAM NARRATIVES FOR FY-1954
DIVISION OF AGRICULTURE

CODE NO.

150 (continued)

would call for reservoirs, retention dams, and the improvement of present irrigation facilities. Wadi dams, of course, are costly and their construction would come via special project agreements with the Saudi Arab Government. In a few areas where there is much water provided by springs and wells with which to irrigate, drainage has become a major problem affecting crop production. This is a problem also in coastal areas, particularly in the East, where the water table is very high.

160

Land Development and Reclamation

In some areas, it now appears that it will be feasible to reclaim land for farming purposes. Water resources surveys, thus far, indicate that there is enough underground water stored in certain parts of the country to make well irrigation feasible. In the Asir province where rainfall is higher than in other parts of Saudi Arabia, storage dams may be desirable. Further rainfall and watersheds need study.

170

Forestry and Observation

Saudi Arabia has no forests. Development of a program under irrigation conditions is not advisable.

180

Fisheries

The Point 4 Division of Agriculture has no plans at present for development in this industry. FAO is now taking the lead in such development.

Submitted January 15, 1953 by:

Wm. J. Edens, Chief
Division of Agriculture

Bud

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

MEMORANDUM

January 14, 1953.

TO: Mr. John A. Dunaway, Acting U. S. Director
of Technical Cooperation in Saudi Arabia

FROM: Mr. W. J. Edens, Chief, Agriculture Division

RE: Revision of FY-1954 Budget Submission

The attached is a revision of budget estimates for FY-1954 as per your request of January 10.

It is recognized that I do not have technical advice available at present in the various fields of agriculture, and more than likely some items have been overlooked, or some included may not be the best under present circumstances. An attempt has been made to include only the items which appear to be basic to an improvement program, and they will not be requisitioned until they are warranted.

Should it be your desire, I shall be glad to discuss this matter with you.

UNITED STATES OF AMERICA
TECHNICAL COOPERATION ADMINISTRATION

Jidda, Saudi Arabia

RESTRICTED

January 14, 1953.

BUDGET ESTIMATES FOR THE
AGRICULTURE DIVISION - FY-1954

This budget estimate is based on the assumption that (1) the Agriculture Division will initiate agricultural improvement work in approximately five selected areas during FY-1954, (2) improvement activities will be in the fields of soils, crops, fruits and vegetables, livestock, insect and disease control, irrigation, drainage, agriculture vocational training, (3) technicians will be employed to conduct the work, and (4) the technicians will be provided with essential agricultural supplies and equipment and means of traveling in the performance of their duties.

It is also assumed it will be necessary to station a general agriculture technician in each area selected, and to provide agricultural specialists in the above-mentioned agricultural fields. The general agriculture technician will be in charge of the agricultural phase of the community, or area, development program. The agricultural specialists will be responsible for planning and conducting agricultural research and demonstrations in the respective areas in cooperation with the general agriculture technician. All work, of course, will have the approval and be in cooperation with the Saudi Arabian Government. It is further assumed that the Saudi Arabian Government will furnish an equal number of agriculturists to work with United States technicians, and furnish interpreters when needed.

This budget does not include equipment necessary for land reclamation.

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-3-

PERSONNEL

<u>NO.OF</u> <u>POS.</u>	<u>TITLE</u>	<u>GRADE</u>	<u>MAN</u> <u>YRS.</u>	<u>SALARY</u>	<u>DIFF.</u>	<u>COLA</u>	<u>TRAVEL</u> <u>& TRANS.</u>	<u>TOTAL</u>
1	Chief of Division	Pt 4-3	1	11,030	2758	2640	-	16428
5	Agriculturist (Gen.Agr.&Extension)	Pt 4-4	5	36,315	9090	8320	14,000	67,725
1	Agronomist	Pt 4-4	1	9,130	2282	2400	3,500	17,312
1	Animal Husbandman	Pt 4-4	1	9,130	2282	2400	3,500	17,312
1	Horticulturist	Pt 4-4	1	9,130	2282	2400	3,500	17,312
1	Entomologist	Pt 4-4	1	9,130	2282	2400	--	13,812
1	Irrigation Engineer	Pt 4-4	1	9,130	2282	2400	3,500	17,312
1	Soils Specialist	Pt 4-4	1	9,130	2282	2400	3,500	17,312
1	Date Specialist	Pt 4-3	.5	5,515	1141	1200	2,000	9,856
<u>1</u>	Sec-Steno	-	<u>1</u>	<u>4,200</u>	<u>1200</u>	<u>1300</u>	<u>2,000</u>	<u>8,700</u>
14	TOTALS		13.5	111,840	27881	27860	35,500	\$203,081

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RESTRICTED

-4-

TRAVEL

<u>Middle East</u>	<u>Per diem</u>	<u>Transportation</u>
3 round trips, Beirut, Lebanon	\$ 400	\$ 500
3 round trips, Cairo, Egypt	<u>400</u>	<u>500</u>
TOTAL	\$ 800	\$ 1,000

Saudi Arabia

1 chief - 30 days @ \$18.00	\$ 540	\$ 500
5 agriculturists - 75 da. @ \$18.00	1,350	500
6 specialists - 1,080 da. @ \$18.00	<u>19,440</u>	<u>2,000</u>
	\$ 21,330	\$ 3,000

United States

1 round trip - 30 days	300	1,500
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TOTALS:	\$ 22,430	\$ 5,500
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GRAND TOTAL: \$ 27,930

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VEHICLES

<u>Station</u>	<u>Type Needed</u>	<u>Approx. Cost</u>
Jidda	Jeep Station Wagon (4-wheel drive)	\$ 2,200
Itwad	Jeep Station Wagon (4-wheel drive)	2,200
	Dodge Power Wagon	2,800
Khulais	Jeep Station Wagon (4-wheel drive)	2,200
	Dodge Power Wagon	2,800
X	Jeep Station Wagon (4-wheel drive)	2,200
	Dodge Power Wagon	2,800
XX	Jeep Station Wagon (4-wheel drive)	2,200
	Dodge Power Wagon	2,800
Spare Parts		<u>3,000</u>
	TOTAL	\$ 25,200

NOTE: All vehicles should be equipped with sand tires and winches.

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EQUIPMENT AND SUPPLIES

<u>Category</u>	<u>No. Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Grand Total Cost</u>
1. Fertilizer	5 T	\$ 60	\$ 300	
2. Farm tools	5 kits	200	1000	
5. Gas Motors	5	100	500	
10. Agr. Equipment for demonstration plots:				
8"horse turn plow	5	20	100	
1-row planter	5	25	125	
Hand Concrete mixer	5	75	375	
Hoes, shovels, forks, etc.	5 lots	100	500	
Hart pruning set	5	75	375	
2-section spike tooth harrow	5	50	250	
2-gal thermos jugs	15	10	150	
1/2 row cultivators	5	20	100	
Spray equipment	-	-	1000	
				\$ 4,775
16. Farm Survey Kits	5	125	625	
Soil Test. Lab Kits	5	400	2000	2,625
17. Imported purebred bulls			5000	
Imported purebred sheep			5000	
Imported improved poultry			2000	12,000
19. Improved seeds and seedlings			2500	
22. Petroleum and products			8000	
26. Insecticides and fungicides			2000	
27. Pharmaceuticals, drugs, vaccines			1500	
30. Educational supplies			1500	
Office supplies and equipment			800	
Woven Wire stock fencing			1200	
Poultry Wire fencing			500	
Screen wire, fine mesh			300	18,300

GRAND TOTAL: \$ 37,700

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SUMMARY

Personnel	-	\$ 203,081
Travel	-	27,930
Vehicles	-	25,200
Equipment & Supplies	-	<u>37,700</u>
TOTAL:		\$ 293,911

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1/3/53

Long Term Functional Program, Annexes A & B: Mr. Betzig and I have spent considerable time in preparing this report. We regret the delay in submission, but we hope to have it ready within a week. So far we have received reports from all of the Divisions except Education, which was occasioned by Dr. Dolley's absence from December 20 until January 2.

WHO Conference

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TECHNICAL COOPERATION ADMINISTRATION
Jidda, Saudi Arabia.CONFIDENTIAL SECURITY INFOAmbassy TCA Jidda
January 27, 1953.MEMORANDUM

TO: Mr. E. Rosenman Fryer

FROM: Mr. John A. Dunaway

RE: Annex A Long Term Program

We are enclosing four copies of the Annex A of the Long Term
Program Report.

John A. Dunaway
Acting U. S. Director of
Technical Cooperation in
Saudi Arabia

CONFIDENTIAL SECURITY INFORMATION